

Vol. 5 No. 7



\$2.25

CURRENT NOTES

The Newsletter For ATARI Owners

Published By

ACE

**The Washington Area
Atari
Computer
Enthusiasts**

Special Features

**The Writer's Tool
PaperClip Revisited
Typesetter
The 520ST Arrives
The 68000 vs 6502
Enhancements to BASIC
Software Licensing
Agreements
Washington Area BBSs**

Regular Features

**Action! Action
Battle Bytes
The CD Report
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Going Online
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ST World
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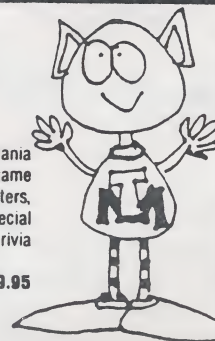
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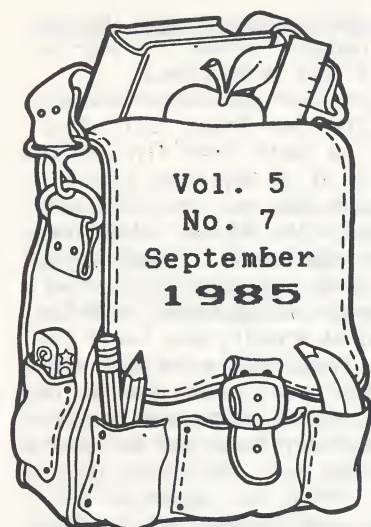


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Current Notes

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Editor's Notes:

Welcome back to Current Notes! I hope you enjoyed your summer. I know the one month respite gave our authors a change to take a breather. I certainly needed the time to take care of good deal of "behind the scenes" work with the mailing list, accounting records, and general correspondence. But the summer is over and now it's time to go back to work.

This September issue is filled with a wealth of information that should keep you engrossed for the rest of the month. You may have noticed that it is a little thicker than usual. Well, we have once more set a new record. This issue of the newsletter is 48 pages long! And, to keep it at that level, I had to talk some of our columnists into letting "guests" take their place this month, and withhold several other submissions including an excellent article by Chris Chabris showing how to use BASIC XL to build a reference database. Chris's article, including the full text of his BASIC XL program, will appear in the October issue.

Enough of what we don't have. What do we have? Well, we have added three new columns to our regular features. George Langworthy of Mission, Kansas will keep us all up to speed on developments in the exciting new field of compact disk technology with his CD Report. Susan Wolff is a local teacher and LOGO expert who will let us follow her progress in introducing students to LOGO in the school system. And finally, I thought I'd author a separate column, called ST

World, to bring you news on what's going on with the new Atari STs. Also in the "new features" column is a page on Community News and Events.

From our regular columnists, Evan Brooks tells about the recent Origins '85 show, Jon Smith lists five useful Action! routines, and Stevenson et al have more tips for you adventurers. Bruce Blake is filling in for Ed Seward this month as he takes a look at the Q-Modem and Q-Term. Both Frank Budelman and Greg Black are filling in for Roland Gabeler with reviews of Gemstone Warrior and Computer Quarterback. Jack Holtzhauer outdid himself with his New Products column this month: he actually used two of the products to produce the first page of the column. Bob Kelly took an additional month off, but he did want me to pass on the message that he's finally discovered a game that keeps him engrossed: The Halley Project. He recommends it highly (see New Products).

The Special Features this month continue our in-depth look at Atari word processors. Last month's PaperClip review generated considerable comment. See the Letters to the Editor section and the response by Daniel Moore, the author of PaperClip. This month I continue the series with a look at the Writer's Tool by OSS. John Barnes takes a look at XLENT's latest product: Typesetter and Marion Kitchens reviews Enhancements to Basic. Jack Holtzhauer tells us about the arrival of the first STs and, for those assembly language programmers out in the audience, Jim Parks provides a comparison of the 6502 vs the 68000 chip. Hope you enjoy it all!

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Letters to the Editor

=====

Dear Joe:

As a relatively new subscriber, I wish to express my appreciation for the excellent job you folks do on "Current Notes". It was fortunate that I ran across the article in Infoworld that evaluated the various newsletters and recommended Current Notes so highly.

In the July issue the subject of word processors is quite well covered. As a new subscriber, I have no way of knowing if in previous issues my favorite, the Bank Street Writer, has been well dissected. Since the BSW has sold in great quantities, I am sure much mention has been made of its advantages and faults. For those of us who are essentially lazy and really do not want to spend much time memorizing vast amounts of instructions, the BSW is right down our alley. For the computerist who is writing a thesis on the quantum theory of light, the Bank Street Writer does not sing his song.

All programs seem to have their shortcomings and this is very true in most word processing setups and especially true when using the BSW. It was not until I encountered the "Fergee File Printer" program by Dr. John C. Ferguson in the August '84 issue of ANALOG that I really found the BSW would fulfill all my needs. For many of us, the normal use of word processing is to tell Aunt Millie in Topeka that everything is going well and Billy is getting over the measles. Using the Fergee File Printer, you have great control over the printing of your masterpiece including the choice of four fonts, right justification, margin settings and many other functions. While the program was written to operate with the NEC 8023 and the Prowriter printers, it can easily be modified to be used with others. Fergee can also be used with programs other than the BSW.

I bring this to the attention of BSW users as I have found many are not acquainted with the public domain Fergee and feel that the Bank Street Writer just cannot do the job. One other great advantage I have found with the Bank Street Writer and Fergee is that I have a spouse who is a fine typist but views the computer with suspicion. A few sessions with the BSW and Fergee and she quickly learned word processing. She now has a very warm spot in her heart for the computer and associated parts.

I am using the BSW to write this letter and will use Fergee to sent it to the printer. Right justification, elite font, 78 letters to the line and default borders will be used. This seems to make a nice appearance.

Best wishes,
Wm. R. Doctor
St. James City, FL

Dear Joe,

Thank you for sending your letter and the Vol. 5, No. 6 issue of CURRENT NOTES. It is indeed a top-notch Atari users' publication....

I had to chuckle at your review of PaperClip. The bugs seem universal: most of them have been plaguing me and an associate of mine who also purchased PaperClip. I've worked out printer compatibility on my Gemini 10X and can program the 4 font options (I use them for double-strike on and off and double-width print in any of the 3 standard fonts). One bug that we found that you didn't mention was the one which occurs when the delete key is held down to erase: after moving a few spaces, the cursor jumps up to the previous paragraph and commences its erasing there. I agree with your overall assessment of PaperClip. I wished I had read it before I bought it. Nevertheless, it does have a couple of features that I have needed that do work very well for me: double-column printing and microspacing for justified margins....

Yours truly,
Robert L. Marrott
Bloomington, IN

Dear Joe,

I read your review of PaperClip with great interest, particularly in light of our brief conversation at the last Novatari meeting. After the meeting, I tried to duplicate some of the problems you reported. Later, with your review in hand, I tried PaperClip's features one-by-one. The results were interesting, to say the least! Comments appear below.

I, too, am disappointed with PaperClip, mainly for the reasons you pointed out, but I still am using it. It has some features that AtariWriter (my favorite) simply doesn't offer. The following features of PaperClip I find particularly useful:

- Windows: ability to move portions of text from one file to another, or just to check how I said something in another document. This feature proves invaluable in preparing "tailored" documents based on one or more other documents, e.g., preparing resumes targeted at a particular position or firm.
- Ability to print graphics in the midst of the text (verbatim files)
- Macros
- Insert/overwrite toggle
- Ability to print to disk
- Micro-spaced justification
- Conditional new page force



- Typewriter mode
- Nonprinting comment lines
- Ability to set and go to tags
- Hard space

All the features listed in the manual worked, except as indicated below. Many of them I haven't had a need for (Table of Contents generation, in-text math, word swap, etc.), but they all performed as expected when tested.

Nonproblems!

-- The problem with window selection could be a problem with your SELECT key not making firm contact at the bottom of its travel. If I press my SELECT key and hold it down for an extended period, the cursor quits flashing, but does NOT jump to the other window until I release it. The only way I could duplicate your problem was to press the SELECT key lightly, until it just made contact -- in that case, arcing across the contacts or perhaps just imperceptible finger movements occasionally would result in the condition you describe.

-- I have had no problems with double-column printing. I haven't done a whole lot of it, though, so will print a few files that way and see what happens.

-- I have never had trouble saving a file from the second window, and I use this feature frequently.

-- On mail merge: there is no need to use the batch facilities (although this works as well). Simply setup your data and form letter files as indicated in the manual, then when answering the print prompts after CONTROL+O, respond with the number of sets of variables in the data file when asked "How many copies to print?". The first letter printed will contain the first set of variables, the second letter will contain the second set of variables, etc.

-- On your comment about not knowing which printer driver was loaded: using a different screen color for each printer driver provides an easy way to know at a glance which you are using.

-- It took me only a couple of minutes to figure out that the example for pagination beginning at other than 1 was incorrect: the preceding instructions are clear.

Problems!

-- Occasional erratic printing behavior -- will be in the midst of printing page two, and suddenly will skip back to the beginning of the file and start printing from there (thus far, noted only on the Juki).

-- Unexplained cursor movement -- usually when using the delete key to backspace -- the cursor will jump up several lines.

-- Centering problems when using a Juki 6100 daisywheel printer in proportional spacing mode. Sometimes works, sometimes doesn't. Also on rare occasions, it will start printing too far to the right.

-- Complete failure to get the Juki 6100 to print in microspaced justification mode. Since the Juki 6100 is capable of 1/120 inch horizontal movements (and even has a graphics mode of sorts), it should be possible. Between the questions asked in the printer driver construction program and the info in the manual, though, I haven't been able to figure out how to do it.

-- Problems using user-defined commands, but they seem to be related to the fact that the printer commands I was trying to use duplicate commands used by PaperClip itself for other purposes. I need to spend some more time on this to find out exactly what the problem is.

-- Problems with special print commands when more than one line is affected. Most recently, it was with bold face -- had to start and end the bold face for each line.

-- Strange behavior (the printer's, not mine!) when trying to use enhanced mode with the compressed font on the ProWriter.

As a final aside, PaperClip probably will be responsible for my purchase of a 130XE. Just read that BI's 80-column card is NOT compatible with the Atari 800 ... all this time waiting for an inexpensive 80-column Atari word processor, and I find out that "old reliable" may still be reliable, but it's old, too!!!

Sincerely yours,
Charles A. Shukis
Springfield, VA

===== Classified Ads =====

Atari 1027 printer with power box and cable; used; in excellent shape. \$100. Bill Gerber (202) 362-2485.

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MICROTEK 32K Memory Board (\$40). Atari 810 field service manual (\$30). Both new and perfect working condition. Call Mike at (703) 385-9794 after 5 pm.

[Classified Ads are free to all CURRENT NOTES subscribers. Copy must be in by the 15th of the preceeding month.]

Community News and Events

Community Education at Local Schools

The Office of Adult and Community Education, Fairfax County Public Schools, has been working with many schools throughout Fairfax County to provide after school or evening hands-on time on Atari for the local community. Some of these sessions are classes for children and/or parents. Some provide a sampling of educational software and some provide open lab time for students to continue work begun during school hours. New approaches are continually tried in order to meet the needs of different communities. Any qualified Atari enthusiasts who are interested in helping with this program may contact Marilyn Borkowski at (703) 893-1090.

Atari Microcomputer Classes

Fairfax county adult and community education will teach several courses on the Atari this fall. Brief descriptions are provided below. For registration or other information on these courses, call Marilyn Borkowski, Computer Program Specialist, at (703) 893-1090.

Computer Literacy for Parents. A general introduction to computers and how they are being taught in the schools. Four-session course offered mornings or evenings throughout Fairfax county. Cost is \$23.

Computer Literacy II. An extension of the above course. Four-session course offered mornings or evenings. \$23.

Home Applications of Computers. Demonstration of various commercial and public domain software available for home use. Offered one Friday morning at Pimmit Hills Center for \$8 or two Saturday mornings at Sherwood Hall Library for \$11.

Introduction to AtariWriter. Four students in a class. Two afternoons or evenings at Pimmit Hills Center. \$23.

Programming with BASIC, I. Learn to use the computer and begin programming in BASIC. Four morning sessions at Pimmit Hills Center for \$44 including text book.

Programming with BASIC, II. Beginning course for those who have used a computer. Six morning sessions at Pimmit Hills Center, \$37 plus textbook.

Programming with LOGO. Six morning or evening sessions at Pimmit Hills Center, \$32.

Atari Sound and Graphics. A four-session course for advanced programmers, \$25.

Marketing Your Original Computer Program. Learn what background information you need, how to advertise, and how the law affects you. Two Tuesday evening sessions for \$10.

Computerfest '85

On October 12, 1985, a unique event will be held in the Grand Ballroom of the Greenbelt Hilton. **Computerfest '85**, a gathering of user groups and vendors in the Washington, DC area will take place from 9:30 AM to 4:30 PM.

Who will be there? Nothing short of representatives from a number of user groups in the area, coming as far as Northern Virginia and Rockville. To our knowledge, such a gathering of user groups within the metropolitan area has not been tried before. Atari, IBM, Commodore and Apple will all be represented, as well as a host of others. There will also be several local area computer stores in attendance, prepared to demonstrate their computers and sell peripherals.

What will be happening? During the day, the user groups will be making available their public-domain software, as well as offering advice on the computers. We are also planning a demonstration of MIDI music in the afternoon, as well as (we hope) a number of on-going discussions on computer-related topics, such as the legal aspects of software ownership, the future of personal computing, and telecommunications. With a little luck, there should also be a gathering of BBS users either during or after Computerfest.

How much is it? Admission is only \$2 with the appropriate discount coupon or advertisement in a user group publication. This gets you in for all the days events.

The Personal Computer Association, in sponsoring this event, feels that everyone will benefit. User groups will be able to meet and exchange ideas, new users will be able to look at what the user groups in the area have to offer, and the vendors that participate will be able to display their wares.

For further information, contact the Personal Computing Association at 454-4275, or via mail at: Personal Computing Association, Adele H. Stamp Union, Room 3113, University of Maryland, College Park, MD 20742.

Atarifest '85

NOVATARI, in conjunction with the other clubs in WAACE as well as the Office of Adult and Community Education of Fairfax County, is planning an all-Atari show to be held in northern Virginia on a Saturday in early November or perhaps late October. Terry White is the chairman for this event. He will need all the help he can get. Volunteers are urged to give Terry a call at (703) 849-1725. Look to the October issue of CURRENT NOTES for more detailed information.

The "We're changing our name"

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Drawing September 30th

The prizes are: 1-Brother's portable typewriter/computer printer
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First & Last Name:**Address:****City, State & Zip:****Phone (for if you win):*****Would you like to be added to our mailing list?***☐ No☐ Yes***Which computer do you own?***☐ None

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Tips 'N Traps**Stevenson, Francese and Burke**

More and more messages! I don't know if I can keep this up! The response to the 'ADVENTURE Q&A' message base is phenomenal. The question of private letters has popped up once again, and the resolution is so far the best one we've had (next to not writing any private messages at all). Here's how it goes. Before you write a devastatingly 'giveaway' solution to some adventure, WARN the reader before you go on. Say something like "CTRL-C to stop solution". It would give the reader a clear indication on the board to stop the message before anything can be given out. I think this is the best reasoning for this problem and everyone will follow it unless it's not a real adventure-ruiner. Hope this has cleared up the past confusion on this problem. Well, see ya next month, and here are the letters. LBR!

PLANETFALL

Q. Just a few things I would like to ask:

- 1) What is the combination for the door somewhere? (Hints are welcome also)
- 2) Where is there a light source?
- 3) Is the helicopter of any use?

-Dragon Slayer"

HITCHHIKER'S GUIDE TO THE GALAXY

Q. I haven't played HITCHHIKER'S but one time. However, I did tape the series from the tube. I recall from the series that Ford told him to take some peanuts. He may need them. Does any of you out there have the peanuts available? After leaving the pub they were picked up by the aliens who destroying the Earth making way for a space highway. They were called the Zorgons or something like that.

-Michael Pollak

GHOSTBUSTERS!

Q. Once your on the screen with the ghost and the portal, what do you do? Where is the "portal"? any help would be appreciated.

-Chris Croson

A. Chris, I assume you're talking about the Marshmallow Man blocking the gateway to Zuul. Here's what you do:

You have to direct 2 GHOST BUSTERS between Marshmallow Man's legs into the doors in the middle. After that, sit back and watch the fireworks! Hope this helped.

-Jim Stevenson

Q. Okay, but I have been trying that and keep getting "kicked" off. I wasn't sure I was doing it right, but now that I know I was, I guess i just need a little more practice! By the way, have you ever had any trouble with the game recalling your account #? It seems that if I try an account number after re-booting the game it won't work.

-Chris Croson

A. Chris, I've never had that kind of trouble. But if you want a way to get easy money on GHOSTBUSTERS, type 'YES' when it asks you if you have an account, '600' for your name, and '1111111' as your account number. This should rake in about \$240000 for you so you can get all of the latest equipment. GOOD LUCK!

-Jim Stevenson

Ultima III

Q. I've been playing Ultima III for about 2 months, most of my guys are 99th level, my cleric and wizard have 75 magic points, all my guys have incredible strength, have full armor and weapons (including plate), I can defeat any enemy (Including an entire guard assault), and I don't know how the heck to get past the stupid silver snake! HELP! I have almost given up. Yes, I have full everyting (2550 hit points, mark of fire, mark of kings, etc.) but how do I win? Please help me. I am losing my insanity. My life is coming to an end...

-The Master

A. OK, but first 2 questions (hints??) Have you found and used both the exotic arms and exotic armor. Without them, you aren't ready to go past the snake. To find them, you can get some clues by buying some drinks (pay extra) and/or by talking to some men you might find in some dark corners of a few towns. Second, to get past the snake: Have you ever tried "YELL"ing something. Again, clues are found as above.

-Dick Knisely

SPIDER MAN

Q. & A. Does anybody know how to get past the Ringmaster, Hydroman, or Mysterio? I can't figure them out. Also, how do you get the bio-gem? Here's how to get past some people:

Sand man: Before you go in type 'CRAWL CEILING'. Go in, look in crib twice. Forget the formula. It is baby formula. When you get out type 'CRAWL FLOOR'. Drop the gem off at Madam web. Lizard Man: Mix the Calc and acid in the lab upstairs. Go to Lizard Man and drop the calc. Look at lizard man and drop the gem off at madam web. To scan people go to madam web and type 'SCAN (whoever)'. You can talk to people by typing 'SAY (their name) 'Please reply!!

-Dean Edward Miller

GameViews

[Frank Budelman and Greg Black are filling in for Roland Gabeler this month.]

GEMSTONE WARRIOR

Reviewed by Frank Budelman

"Brave warrior, your goal is to return the five pieces of the Gemstone to the temple. First, you must find the way through the system of underground caverns that lead to the maze. Once inside the maze, find the five pieces of the Gemstone. When the pieces are gathered, you must escape the Demon's lair through the spinning gateway and place the Gemstone on the temple altar. Go with haste, for if you succeed, you will be rewarded with great treasure and honor as the Champion of Man and our world..."

So ends the Gemstone tale and begins the game. Recently I had the great pleasure of reviewing a new fantasy-adventure game called Gemstone Warrior by Strategic Simulations, Inc. If you enjoyed Temple of Apshi, Hellfire Warrior, Castle Wolfenstein and Lode Runner, you're going to love Gemstone Warrior.

Unlike the traditional role-playing fantasy-adventure games, the player is not able to pre-select the hero's strength, health, intuition, etc., nor his/her accessories needed for the quest. Our hero begins the game with numerous items at his or her disposal; the items at our hero's disposal consist of such things as fire bolts, arrows (our hero comes equipped with a crossbow), potions, magical items and a display to let the player know which are available at any given time.

While the program allows for the use of a joystick, it also requires the use of certain keys for other specific effects and special commands. Like Hellfire Warrior and Castle Wolfenstein, there is a story about the Gemstone and how it came to be that a quest was needed. Unlike Castle Wolfenstein, you do not have to read through screen-after-screen of story because Gemstone Warrior has it placed in the instruction booklet. This magical gem was the source of good magic in the world until it was captured by the demons of the netherworld; it was split into four pieces and hidden in the caverns under the earth where the demons called home. You, the player, are tasked with guiding (nay, becoming) the warrior in a search for the pieces of the Gemstone and returning safely to your starting point.

Once you set off on your task to the caves and tunnels of the demons, you are constantly beset by various and sundry creatures, ghosts, skeletons and the dreaded **ENONS** as you make your way ever closer to the Gemstone pieces. The pieces can be hidden anywhere, so you must search everything; the tunnels and caverns are richly done with color graphics and are actually representative of caverns and hallways.

As I stated earlier, the game utilizes both keyboard commands and joystick to move the Warrior to his/her final destination. Although there seem to be quite a number of

commands and instructions that are delivered from the keyboard, the program is set up for the ATARI so that the joystick can perform many of the keyboard functions -- not all, however. The program has many levels of difficulty, not the least of which is remembering which keys to press for which command while having the fleetness of eye and finger to avoid pressing the wrong key just as you are about to be destroyed by some nefarious creature that roams the tunnels, caves and hallways of this program. While having to utilize both keyboard and joystick does add to the complexity of the game, with practice it isn't as bad as it initially appears.

There are three levels of play -- labeled Beginner, Normal and Kamikaze. For a seasoned role-play adventurer, the Beginner level is a fine level to get the feel of the game, use all the weapons, discover the uses for the various potions and magical items and become familiar with the types of characters that the Warrior will encounter in the various tunnels and rooms. The Normal level is a much more action-packed and fast-paced level than the Beginner level and is more difficult. It is not the level for a rank beginner to start on because he/she will encounter extreme frustration most of the time and, because reaction time is so short at this level, the player will not get full benefit of the many options offered by the program. My advice is that beginners should stay at the beginner level until they become bored. The Kamikaze level will tax even the most advanced and fleet of eye and finger of your arcade game experts because of the search, destroy and evade shoot-em-up characteristics combined with the need for thoughtful decision-making in the selection of weapons, magical items, healing potions and bonus time constraints. The added dimension of decision-making wherein one has to decide, in a given time, whether to use the joystick, press certain keys on the keyboard to evade, search, use an item, kill, destroy etc. further adds to the complexity and almost makes the Kamikaze level impossible. It should be noted, however, that this review is coming from someone slightly beyond beginner, so those of you who are arcade and adventure experts may not have as much a problem with the Kamikaze as I. Beware, however, that as you progress through the levels, the magical properties in your inventory change, and in some cases, actually reverse their utility, e.g. something that will decimate all opposition in the beginner level might revitalize monsters in another level.

At all times during play, the player must monitor the health level of the Warrior, amount of weapons left and make decisions whether to change weapons or add to the arsenal. The program tracks total points earned, the amount of Gemstone particles in your possession and displays the time remaining in which to earn a special bonus. It also identifies the type of monster or character you are searching as you look for items in their possession. This can be a help in finding your way back if you remember the characters you have sent to their ultimate karma along your way. The instruction booklet describes the characters you will meet and their potential for harm. It lists and describes most of the potions and magical items available but leaves much of their usefulness for you to ascertain along your journey. Part of the fun of this game is discovering what the magical items actually do and how to use them in different situations.

This isn't a game of patience and thoughtfulness -- it is a game fast learning, quick decisions and hair-trigger action. Even in the Beginner mode, you cannot spend time thinking about whether or not to do or use something because your enemies can and will appear anywhere and will multiply in proportion to the time you spend thinking. For those of you who must take a break or think during action, there is the ability to freeze the screen.

In my many hours of use, I encountered only one problem; it only happened twice. As I was moving through a door or gate the system would lock up with an audible hiccup. At that time, I got an error message from the program and was given an opportunity to restart entry or exit the game. One time it restarted and the gate opened allowing me through to continue the game, and the other time it would not restart. Upon choosing the exit mode, my game was not saved and I lost all the points and momentum of a number of hours of play. Incidentally, there is a command that allows for saving a game in progress.

Even with the one glitch in the program, I believe this game to be well worth the retail price (approx. \$35) for the amount of pleasurable playing time that it will produce. In a ranking of all the games that I have played and liked, I would rate Gemstone Warrior by SSI, 8 out of a possible 10.

=====

COMPUTER QUARTERBACK

Reviewed by Greg Black

=====

So maybe the "big" game on Monday Night Football is only slightly more interesting than wristwrestling from Petaluma, Ca. Don't despair! How would you like to draft your own team with \$3 million to spend on players, and draft your opponent as well? You can with the second edition of Computer Quarterback from SSI.

Computer Quarterback is a real-time computer strategy football game. With your ATARI you can sit down by yourself or with a friend and call the plays. The computer is the timekeeper, referee, and line judge. Plays are chosen by number via joystick and the results are displayed on-screen.

CQ has three "scenarios", a solitaire version (in Semi-Pro), two player Semi-Pro, and Pro. The distinctions among and features for each will be discussed during the course of this review. The Semi-Pro is the easiest and may be played solitaire or by two players, so it will be the starting point.

When the player decides which of the three versions to play, the opportunity to generate "unique" or standard teams is offered. If unique teams are not chosen standard teams default. The unique teams gives the player the chance to "buy" positions for the team. A budget of \$3 million is given and of course if you elect to take an expensive QB or Back than less than average players must be chosen to balance. You can draft several teams per "team" disk. SSI also has team disks based on actual NFL teams for the 1984 season which can be purchased separately. In the solitaire version you can play the ROBOTS or an oppo-

nent you have drafted. Hard-copy of team qualities and play assignments of any unique team may be made from most 80 column dot-matrix printers.

In the Semi-Pro version there are 14 defensive and 18 offensive plays and each are nicely charted on a double sided card stock play sheet. There are 36 offenses and 24 defenses in the Pro version als with a play sheet. The manual has a section describing both offensive and defensive plays and strategies. The Semi-Pro version has play numbers assigned, but these may be individually reassigned or computer assigned when teams are chosen. When playing with a second person plays should be reassigned because they play numbers appear on the display. A hard copy may be made of the play assignments.

Play numbers are input with the joystick while the timeclock ticks away. Plays may be changed until the 30 second clock expires but after a team is set this has the same effect as an audible, which may mean confusion and blown plays. The display indicates line ups with X's and O's that show the actual formations when the offense sets. Actual play execution is not shown but a brief narrative description is displayed. I would have liked to see the execution onscreen and its lack does take away some excitement. Previous plays for both sides are displayed at the top of the screen above the score board. A field to the left of the screen indicates ball placement and first down marker. Time outs may be called by each side or the officials. Official time outs come in handy when trying to react to the pressure of the 30 second clock and you are studying your play sheet! A longer clock is offered as an option at the beginning of the game.

A nice touch offered is the "game film." This is a print out of the time, down, play and other pertinent stats for each team after each down. This is really useful for examining previous games and opponent's tendencies. Regrettably, this is only available in the Pro version.

Provision is made for penalties, fumbles and interceptions which occur randomly. Interceptions are more predictable depending on the pass play or coverage selected. Probabilites for incompleated passes and out of bounds runs and passes are given as well. An "average gain" chart is provided that is helpful in determining likely results of specific offensive plays against defensive plays. The Pro version also allows for special defensive alignment (tight, spread, or standard) and double teaming ends or flankers.

Computer Quarterback is a good strategy game which familiarizes the player with the merits of different plays and sets. I was sorry that the game film was limited to the Pro version because it would add to the Semi-Pro as well. The inability to see plays actually execute hampers strategy adjustment after downs and this is my only major criticism. The draft and the ability to store teams with varying strengths is an excellent feature that provides enough variety to keep the game interesting. It also gives the player the chance to try a shot at coaching a favorite team. COMPUTER QUARTERBACK retails from STRATEGIC SIMULATIONS, INC. for \$39.95. The 1984 NFL Teams disk is \$15.

The CD Report

by George Langworthy

Optical Disc Publishing

HI!! I'm very pleased to share my enthusiasm and information about the birth of an industry: optical disc publishing.

First, a little about me. I live and work in a suburb of Kansas City, have a Bachelor of Arts and M. S. in Retailing degrees from Eastern schools. I'm new to the World of ATARI. I've been a small business data processing student, programmer, manager using edp and high technology analyst, starting off with IBM punched card accounting machines.

My point of view is that of a knowledgeable user. Sometimes for fun, sometimes for money, I've studied technology since the '50's. I look for what is available now and coming up to serve my, my business's or my client's needs. Though I have preferences, I'm not tied to any particular brand of hardware or software. Currently, the Atari 260/520 ST single user and DEC MicroVAX II 32 bit multiuser supermicro computers are the "hottest" in their respective markets, so say I. If you'd like to chat or write, I can be reached at 6025 Martway, #111, Mission, KS 66202, (913) 722-0101 (24h).

Optical Disk Memory: CD-ROM - What Is It? It's darn near magic! Each 4 3/4"(120mm) Compact digital audio Disc, abbreviated CD, holds 14+ billion bits of raw data. When formatted into 270,000 blocks of 2,048 bytes each, the total capacity is 550 megabytes. Look at one when you go into a record store. Notice the diffraction grating effect. The one micron data "spots" make a track three miles long.

How Did CD-ROM Come About? Why is my new LP record or tape a whole bunch of bits? Over ten years and \$600 million ago N. V. Phillips, Magnavox in the USA, and Sony Corporation decided that laser technology was the best available with which to develop a "perfect" replacement for LP records and cassette tapes. Digital laser recording and reproduction allows audio signals from 20 to 20,000 hertz to be reproduced + or - 1 db and without distortion.

How Does It Work? Two channels each are sampled 44,000 times per second at 256 loudness levels. Each sample is then recorded as an 8 bit word. Information theory states that a sampling rate double the highest frequency allows 100% of the information in the original analog signal to be stored and recreated. The CD holds up to 75 minutes of perfectly reproduced music.

A marvelous bonus results for we data types. Almost all applied r & d, manufacturing and tooling costs are being paid for by audiophiles! CD hi fi players now sell for under \$250. In 1986, you will be able to buy a combination CD audio and CD-ROM player/disc drive for a hundred or so dollars more than the CD audio alone. Plug one set

of wires into your stereo amplifier and the other into your personal computer.

What About ATARI? Reporting on the Chicago June Consumer Electronics Show, several industry magazines said Atari had the most significant new product. Atari demonstrated a prototype CD-ROM disc drive and controller plugged into a color 520 ST. Atari plans to have it's \$499 CD-ROM drive and controller out before the end of 1985.

What Data Base Will Be Out First? Grolier, Inc. and Activenture Corp., Monterey, CA demonstrated a 21 volume encyclopedia on CD-ROM. This took up less than 1/4 of the capacity of the CD-ROM disc. All seven references to "toothache" were displayed in under 10 seconds. When the 520 ST searched, it didn't have to cover each word of the entire 21 volumes. It looked at an index of the 141,000 separate words. After each word were pointers to the locations of all blocks containing that word. This software was written under Digital Research's GEM for the Atari ST. It appeared to work very well with the prototype CD-ROM and data base disc. At Chicago National Computer Conference in July, Grolier announced that the IBM version of the encyclopedia will sell for \$199 list in the fall 1985.

Why Will The CD-ROM Cause a Revolution in Publishing? As Tom R. Halfhill, Editor, COMPUTE said in the August 1985 issue, "To think of a CD simply as an efficient way to store mass amounts of data is to miss the point...a CD-ROM (system) can find the slightest, most obscure fact in a massive database in less time than it takes you to pull a book off a shelf and flip it open to the index."

CD-ROM is 1/1000 the cost of paper at one penny a page. Manufacturing cost is \$2.70 each including the box. Microfilm and microfiche are at least 100 times costlier. A 500 megabyte computer disk drive and controller are 30 times Atari's proposed \$500 cost. CD-ROM is by far the lowest cost way to store and retrieve from large amounts of information.

Even more significant is the accessibility to any specific item in a few seconds. With proper indexing and software on the disc, you can do a free text search of everything in the data base. Boolean searches of multiple words next to each other, in same sentence, in same paragraph, on same page and in same article are all available under the Atari/Activenture software.

That's Awesome! What Next? The first byte of each block is an 8 bit status indicator. It tells the computer which of any of 256 kinds of information are contained in the following block. Single frame b/w and color pictures, combined audio with text, and graphics are a few of the possibilities.

Denon has announced the SL-P15, a 51 disc capacity multi CD audio player. It has CD-ROM output and a communications card for external computer control. It is 16x8x16, will be available around Christmas 1985, and carries a \$1,500 price tag. Here could be a 50,000 volume, word by word indexed, reference library the size of your stereo hi fi receiver. In under 15 seconds, you could

(Continued on Page 13)

Battle Bytes

by M. Evan Brooks

ORIGINS '85

ORIGINS '85 was held on June 27-30 at the Towson University Campus (near Baltimore, MD). The annual National Wargaming Convention is the wargamer's equivalent of the CES. What is most interesting is that computer wargames are rapidly expanding their hold on the hobby. In 1980-81, computer wargames were an isolated sideshow; today, they are an integral part of the hobby.

This writer spent much of his time with the computer wargamers at the Convention. Most of the famous designers were there (with the exception of Chris Crawford). The SSI staff and their designers were present in force -- Gary Grigsby, Chuck Kroegel, etc. What was most interesting to this writer was the approachability of the staff; both Joel Billings (SSI President) and his designers are personable individuals, who make a sincere effort to please the hobbyists. By the time this appears, SSI will have released Colonial Conquests, a simulation covering the colonialist expansion of the Nineteenth Century. Gamers expecting a computer simulation of Pax Britannica (Victory Games) will be disappointed; the game is an amalgam of Risk and Diplomacy. Although more introductory than this writer would have liked, it still sounds interesting. A fuller review will be made after it is released.

Microprose Software was also present in force. In fact, their advertising might be deemed too forceful -- "#1 in Simulation Design", "cutting edge of computer wargaming", etc. Microprose is going into the software market in a large way -- having released Crusade in Europe, Decision in the Desert is soon to follow. Future releases will be Kennedy Approach (aircraft controllers, with excellent sound [but no possibility of a PATCO strike?]), Silent Service (submarine warfare), Gunship (modern helicopter warfare), etc. This writer's impression of the Microprose staff is more guarded. Dr. Ed Bever, the historical analyst for Crusade in Europe, was just very personable. His credentials (Ph.D. in history and formerly on the faculty at Princeton University) give credence to his efforts. However, the marketing staff seems a bit hyper and somewhat condescending to hobbyists. As a relatively new company, Microprose is still suffering growing pains. Most of its previous designs were the product of its founder/designer. Its new expansion may turn the company's attitude into a more approachable one.

GDW was showing off Chicamauga (already released), as well as a test copy of its new Rommel computer game. However, although the games are complex, the graphics are primitive, and very truthfully, at this time, they do not appear to be state of the art. Scrolling in these games causes a flicker, and the specter of pixels detaching themselves as an amoeba-like extension representing armies on the march is not awe-inspiring. Gamers have come to expect certain things from games; having additional complexities in historical accuracy are needed, but at the cost of nice graphics, the trade-off may be too high. Time will tell...

Australian Design Group (of Carriers at War) showed off their new air war game Europe Ablaze. Sadly, none of their efforts are made for the Atari as yet (the Atari machine has not penetrated into Australia; the Commodore is king Down Under). Also, their Carriers at War received the Charles Award for best Computer Game of the Year. Atari owners, you will have to be patient. This writer spent some time with the staff, and they are considering the possibility of conversions.

Other companies were present. Car Wars and Ogre are being planned releases through Steve Jackson Games (again, not for the Atari). Also, most interestingly, some independents showed up at the Convention. D.K.G. showed a World War II game (graphics similar to Eastern Front, but supposedly more complex). At \$40 per copy, their sales appeared minimal; the lack of a track record and advertising appears to be a death knell in the market. The industry has passed the days of the instant designer coming out of nowhere and marketing a success by himself. In fact, D.K.G. was looking at potential marketing by some of the more established concerns (e.g. SSI, Avalon Hill, etc.).

One final note: Joel Billings made an interesting observation. When queried as to why no Mech Brigade for the Atari, he stated that Atari owners were quite vociferous and vocal, but their money did not match their mouths. The marketplace is driven by the dollar, and not by the spoken or written word. Thus, conversions are slowed down or deleted altogether. (Note: SSI still plans to support the Atari)

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Optical Disc Publishing (Continued from Page 12)

find whatever you wanted from 27 gigabytes, or 13.5 million computer pages at the cost of a 40 meg disk drive.

For more information, please read or contact:

COMPUTE, August 1985, page 16; "Monster Memory". Describes the potential of CD-ROM and has more technical data.

DIGITAL AUDIO; monthly magazine; September 1984 ff issues have CD-ROM articles by Bryan Brewer. Address is Digital Audio, Peterborough, NH 03458-1194.

DIGITAL AUDIO; book by Nakajima and others; TAB paperback \$11.95; Describes the format and error correcting scheme for the compact digital audio disc. A must if you want to know exactly what CD's and CD-ROM's are.

OPTICAL DISC READ ONLY MEMORY FORUM; October 23-25, 1985, Arlington, VA. Sponsored by Learning Technology Institute, Warrenton, VA 703-347-0055. LTI is a non-profit public interest corporation. It has been actively conducting programs in laser disc technology since 1979. Published proceedings, exhibits, panels and paper presentations. Go if you might use CD-ROM systems in your work. I'm presenting a paper. Call for information. Fee.

ACTION! Action*by Jon Smith*

This month's Action! Action offers a break from the tutorial-style that previous installments have offered. Instead, I'll present five miscellaneous Action routines that are ready for use in your own programs. The routines range from very simple to more complex. The Action code for each routine will follow the description.

1. PROC InverseLine

This procedure will allow you to invert all forty characters on a line in graphics mode zero (standard text mode). This is mainly useful in making your program look more professional. Inverting a line that has already been inverted will restore the line to its original form. One suggested application of this routine is to highlight options that have been selected in a program.

The format used to call InverseLine is:

```
InverseLine(BYTE line)
```

The parameter 'line' contains the line to be inverted (0-23).

```
PROC InverseLine(BYTE line)
CARD savmsc=$58,addr,i
BYTE x
```

```
IF line<0 OR line>23 THEN RETURN FI
addr=savmsc+(line*40)
FOR i=addr TO addr+39 DO
  x=Peek(i) x==+$80
  Poke(i,x)
OD
```

```
RETURN
```

2. PROC Center

This routine is also very straight-forward. It is to be used just like the Action libraries' PrintE, except that the text printed will be centered on the screen. Again, this routine is to be used only in standard text mode.

The format for the centering routine is:

```
Center(CHAR ARRAY text)
```

Character array 'text' contains the text to be printed. If the text sent to PROC Center is longer than forty characters (the maximum screen width), the text will not be centered. Instead, it will be printed by the Action libraries' PrintE routine.

```
PROC Center(CHAR ARRAY text)
BYTE t,p,rows=$54
```

```
IF text(0)>40 THEN PrintE(text) FI
t=text(0)/2 p=20-t
```

```
Position(p,rows) PrintE(text)
```

```
RETURN
```

3. PROC Wait

When called, the Wait routine will wait a specified amount of time before returning. The length of the pause is measured in tenths of seconds.

The format for Wait is:

```
Wait(CARD tenths)
```

The parameter 'tenths' contains the number of tenths of seconds to wait. The call to wait one second would be:

```
Wait(10)
```

Likewise, the call to wait one minute would be:

```
Wait(600)
```

```
PROC Wait(CARD tenths)
BYTE clock=20
```

```
WHILE tenths>0 DO
  clock=0 DO UNTIL clock>5 OD
  tenths==1 OD
```

```
RETURN
```

4. BYTE FUNC Console

This routine allows you to read the status of the console keys more easily (START, SELECT, and OPTION).

The format for calling the Console routine is:

```
x=Console()
```

The variable 'x' contains the value returned by the FUNCTION Console. The value will range from 0 to 6:

Value	Keys pressed
0	START, SELECT, and OPTION
1	SELECT and OPTION
2	START and OPTION
3	OPTION only
4	START and SELECT
5	SELECT only
6	START only

The routine will not be exited until all console keys have been released. This is to insure that there is no key repeat. With key repeat, pressing a console key for an instant could register in your program as having been pressed several times.

```
BYTE FUNC Console()
BYTE value,consol=53279,i
```

```
DO
  value=consol
```



```
UNTIL value<>7 OD
```

```
DO
```

```
  FOR i=1 TO 20 DO OD
```

```
UNTIL consol=7 OD
```

```
RETURN (value)
```

5. BYTE FUNC SectorIO

This is a more advanced routine allowing you to perform direct sector IO functions with a single density disk drive.

The format used to call SectorIO is:

```
x=SectorIO(BYTE command,
           BYTE unit,
           CARD buffer,
           CARD sector)
```

The parameter 'command' should equal one of the following:

Value	Function
\$52	Read sector
\$57	Write sector with verify
\$50	Write sector without verify (faster)

The parameter 'unit' should contain the number of the disk drive you wish to access (1-4).

The address of the IO buffer is the parameter called 'buffer.' This is location where the data to be used in the sector IO is found. The buffer should be 128 bytes long. If you choose to use a BYTE ARRAY as a buffer, you can use a POINTER instead of an actual address. For example:

```
BYTE ARRAY buffer(127)
```

```
BYTE POINTER bufpointer
```

To get the address of the buffer, use:

```
bufpointer=buffer(0)
```

The variable 'bufpointer' would then contain the address of your array. Obviously, the parameter called 'sector' holds the number of the sector to be read or written.

After the IO is completed, variable 'x' will contain a value. If it is 1, then the IO was successful. Any other value will be a system error number, listed in your disk drive manual.

```
BYTE FUNC SectorIO(BYTE command,
                   BYTE unit,
                   CARD buffer,
                   CARD sector)
```

```
BYTE ddevic=$300,
dunit=$301,
```

```
dcomnd=$302,
dstats=$303
CARD dbuflo=$304,
daux1=$30A
```

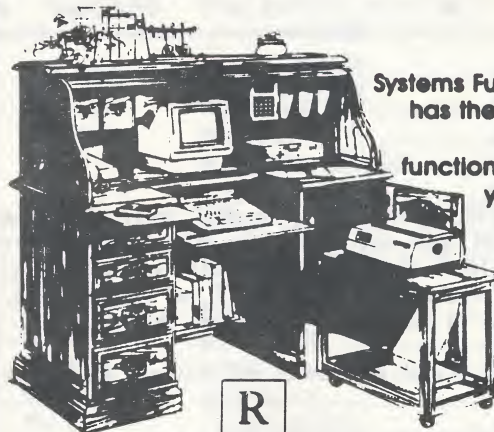
```
dcomnd = command
dunit  = unit
dbuflo = buffer
daux1  = sector
ddevic = dunit + 48
dskinv()
```

```
RETURN (dstats)
```

That wraps up this month's edition of Action! Action. I hope you find the routines listed in this article useful. If you have questions, comments, or suggestions (especially suggestions), please call me at (703)437-8652 or find me at Novatari meetings. Until next month, keep up the Action.



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Going Online

by Bruce Blake

Q-Modem and Q-Term

(Quantum Microsystems, Inc., P.O. Box 179, Liverpool, NY 13088-0179, (315) 451-7747 \$149.95 Retail. Requires: ATARI computer with 48K RAM, one disk drive, tone or pulse phone service. Works with: ATARI 400, 800, 800XL, 600XL, 1200XL, 130XE. ATARI 1200XL requires modification.)

I saw the add for the Q-MODEM in ANALOG on the back of the ANALOG TCS users guide. Their add sounded too good to be true, so I called them, and they said their modem would do everything advertised and more. So I plumped down my money on April 22, on June 6 it finally arrived. Six weeks is a long wait and when it arrived I was hoping it was worth the wait.

What you get for your money is a 300-baud direct-connect modem that can be upgraded to 300/1200 baud operation, the Q-TERM software that makes the modem shine, and an R: handler that will let you use the Q-MODEM with your favorite BBS program. The R: handler works perfectly with ANODEM 4.2 and ANODEM 7. The manual is on the back of the disk.

The Q-MODEM is very easy to connect. It has one cable and two sockets on the 4x5x1-1/2 inch box. The cable goes into the ATARI daisy chain and one of the sockets is to continue the chain. The other socket is for the modular telephone cable that is provided. There is no power supply, it draws its power from the ATARI. One less power supply and one less on/off switch to worry about.

The software is booted without BASIC. The first screen you are shown is the main menu with following selections.

DIAL
ANSWER
EDIT
SET-UP
HELP

I went straight for HELP. The HELP section told me to turn the disk over and read those HELP files. There were 15 HELP files. 15 HELP files on disk are no help so I rebooted the system with ATARIWRITER and printed them. Then I was ready to go. They told me many things,

1. I will get the final version of the software when it is completed.
2. What software does and does not work yet.
3. Warranty information and the like.
4. Make backups of the disk.

Nothing is copy-protected so no problem there.

What does each menu selection do: DIAL will autodial your numbers and load a SET-UP file and a set of MACROS if you have defined them. ANSWER will answer the phone and can

be made into a mini BBS. EDIT is a small text editor, but it is not finished. SET-UP is where you select how Q-TERM will be configured. HELP will let you read FILENAME.HLP files.

DIAL is where you make up a directory of the 16 bulletin boards you call most. You can pulse or tone dial. Speed pulse dialing and long distance access are also supported. You can even have the dialer redial the number every 30 seconds until a modem answers. Nice when ARNUDIC gets busy. The dialer will do some other things too. When you select your number, Q-TERM will load a BBSNAME.SET file to configure the system to the BBS's needs. You set up this file in the SET-UP section. You can also set up a BBSNAME.KEY file that will load a set of MACROS. There is even a provision for Q-TERM to log you on automatically. I have not figured that part out yet. It is the best autodialer I have seen.

The ANSWER section will let you set your computer up as a mini BBS, Answer the phone and log a message to the printer, etc. There is a disk available with a customized AMIS BBS program for the Q-MODEM.

EDIT is not ready yet, so you can only read text files in this section. When finished it will be a small text editor to set up text files and the like.

SET-UP is the section you use to configure the BBSNAME.SET file for each BBS you call. You have the following functions to define.

TRANSLATION	== ATARI ASCII OTHER
DUPLEX/ECHO	== HALF/ON or FULL/OFF
PARITY	== NO ODD EVEN MARK SPACE
BAUD RATE	== From 110 to 1200
LINE FEEDS	== APPEND DON'T APPEND
CD WAIT TIME	== 0 to 99 Seconds
ANSWER RING #	== 0 to 9
FILE TRANSFER	== NONE X-MODEM CIS
USE X-ON/X-OFF	== YES NO
<CR> PAUSE	== 0 to 99 Seconds
TOUCH TABLET	== ATARI or KOALA
COURSER BLINK	== OFF SLOW FAST
SCREEN COLOR	== BLUE BLACK GREEN GOLD
TEXT BRIGHTNESS	== LOW MED HIGH
INVERT VIDEO	== YES NO
LEFT MARGIN	== 0 to 3
RIGHT MARGIN	== 37 to 39
COLUMN SIZE	== 40 64 80

As you can see, you can set Q-TERM to work with any BBS, and Q-TERM will be configured automatically for you when you select the BBS in the DIAL section.

HELP will let you read text files that end in .HLP. The files are presented 16 lines at a time and then the system waits for you to push <RETURN>.

The MACRO functions are defined in the terminal mode. A bit of a pain because you must be logged on to a BBS to do the defining, saving, and loading. You can have 36 MACROS defined. Numbers and letters can be used. They are invoked by pushing <OPTION> and the key. The MACROS

you construct can use the 24 MACRO Key Commands. These are special commands that can make your MACROs into small programs. Within the MACRO file you can program a MACRO to answer the phone or automatically log you on to your favorite BBS. When completed this will be the most powerful part of Q-TERM.

There is a 300/1200 Baud upgrade in the works and that will make the Q-MODEM an even better value. The upgrade will cost \$79.00, and it should be ready 1 July. I plan to get it and review it as soon as possible. The Q-MODEM will be available with the 1200 baud option installed for \$229.95

Is Q-MODEM with Q-TERM worth \$149.95? YES, for the price it can't be beat. You get a complete BBS system for one price. It has a learning time of about two days but once you have a handle on it, it is very easy to use. It also takes much of the drudgery out of BBSing with the AUTODIALER and the MACRO functions. The 300/1200 baud option will make it an even better value.

Happy BBSing.



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ATARI, INC..BBS.....408-745-5308
COMPUERVE.....703-352-7500

NEW PRODUCTS

By Jack Holtzauer - **MACUG**

As usual, this column is devoted to new products for the ATARI actually appearing on dealer's shelves. Except where evident, descriptions and claims are those provided by the manufacturer.

ATARI 520ST COMPUTER ATARI CORP SUNNYVALE, CA

They're here! No need to describe them! They've been featured in the last several editions of **AMIC** and **ANALOG**, et al. Systems received through users' groups and now being offered by dealers have the operating system and GEM on disk and come bundled with LOGO. BASIC, at no additional cost, and the OS in ROM are promised soon.

Current systems are available in two configurations -- with a 640x400 monochrome monitor at \$800 or with a 640x200 color monitor at \$980. Don't look for deep discounts on these packages in the near future. ATARI is allegedly closely monitoring sales in an effort to keep dealer prices in line.

If you've heard horror stories about the high incidence of defective units received by users' groups, you've heard right! Of the three units initially received by **MACUG**, all failed to operate on initial power-up. A call to ATARI received a prompt response and we got two working within a couple of hours, although one later failed - never to be revived. The problem? The story has it that tape was used to help seat two of the larger IC's and that cold temperatures experienced during air shipment caused the adhesive on the tape to fail, unseating the chips. In any case, we arranged for ATARI to ship replacements by UPS and to pick up the cripples at the same time. Both replacements worked fine on arrival and the owners have experienced no problems since.

TYPESETTER XLENT SOFTWARE PO BOX 5228 SPRINGFIELD, VA 22150 PRICED AT \$34.95 (DISCOUNTS AVAILABLE)

Released by Linda and Mike Barnes of XLENT Software and written by Len Dorfman & Dennis Young, all of whom previously collaborated in bringing us **PAGE-DESIGNER** (see CN Jun 85), **TYPESETTER** allows the user to "compose a page using the MAXIMUM resolution of the printer as opposed to the maximum resolution (320x192) of the ATARI home computer." Issued on a double-sided disk with **TYPESETTER 65** (704x624 res) for 48K ATARI's on one side and **TYPESETTER 130** (768x672 res) for the ATARI 130XE on the other, this package "is one of the most powerful graphics tools available for any micro - and the very first commercial program available for the 130XE computer." The program includes 17 character fonts and 52 border designs (104 when you count the inverse versions), available in eight heights. A graphics editor is also supplied and the program allows the user to load standard 7+ and 8 graphics

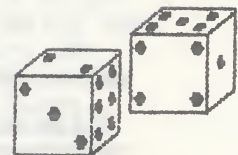
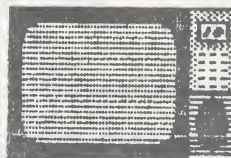
screens. As you've probably guessed by now, this page was produced using **TYPESETTER** and White Lion's utility pack described below. Some samples of other **TYPESETTER** fonts follow:

SPACE ROMAN MODERN
SQUARE STYLISH

OTHER SIDE
SIDE

TYPESETTER / GRAPHICS LIBRARY #1 WHITE LION SOFTWARE PO BOX 357 RIDGE, NY 11961 PRICED AT \$23.95

This three-disk set, written by Ira Brickman, is billed as the perfect crutch for the **TYPESETTER** user. One disk provides layout grids for both the 65 and 130 versions (see lower right corner). The second offers ten new character and 83 new border fonts, the latter including vertical, horizontal and corner designs. Again, the inverse versions of borders may be utilized. The third disk includes 41 icons which can be transferred to your **TYPESETTER** pages. The disks are not protected, very reasonably priced, and include documentation files which can be dumped to printer. Some sample icons are shown below:



NINOWHEEL SYNAPSE/BRODERBUND PRICED AT \$39.95 (DISCOUNTS AVAILABLE)

NINOWHEEL, a disk/book duo, is a horse of a different color - an "electronic novel." According to Synapse, the electronic novel "picks up where the printed word leaves off . . . by combining the novel on the printed page with the dynamic technology of the computer, we have discovered a remarkable new entertainment experience - a fictional universe constantly changing, with you in the center of the action. You leap from the first printed chapters in (the) book to the screen of your home computer. The adventure picks up on diskette, pulling you into an excitingly vivid, action-packed world. Your intuition and the choices you make determine what happens next, how . . . the novel unfolds . . ."

New Products - Continued

MINDWHEEL's plot? Simple. "The Federated Nations have collapsed. Lennon City-Tokyo, Feingrad, Nuevo-Paris are teeming with strife and violence. In Capitol City, seventy thousand crazed rioters storm the Washington Monument. As the weapons of oblivion assemble on the horizon, the long-feared apocalypse seems inevitable. The howling, demented crowd shrieks for action. Only Doctor Virgil understands the narrow, mysterious path to your civilization's survival. But Virgil desperately seeks a Mind Adventurer!" Guess who?

BASIC XE

Optimized Systems Software, Inc., 1221B
Kentwood Avenue, San Jose, CA 95129
Priced at \$79.99 (discounts available)

"... the only programming language designed especially for the Atari 130XE" finally hit local dealers shelves on the first of August.

I picked up a copy the following day. But don't be too quick to follow suit. I soon found that a couple of the simple commands failed to work properly, so I called OSS and was advised that they had detected a number of bugs in the original version (4.0) and that an update (Ver. 4.1) was in the works.

Surprised that an OSS product could be so fatally flawed that it required extensive revision almost before the ink on the box was dry? So was I. Whatever happened to beta testing? Whoever's doing it needs to be replaced by a pinch-hitter. Why not someone from WAACE? Couldn't we beta beta? You betcha!

Anything in defense of OSS? Yep, a couple of things. OSS is one of the few software houses actively supporting the ATARI and their "warranty" policy on products is somewhat unusual. They offer, of course, the near-standard 90 day warranty on defective media. If your program disk or cartridge is found to be defective in "material and/or workmanship", they'll replace it for you. But they go a step further. Any cartridge-based product can be returned to a participating dealer within ten days of purchase for a full refund. In other words, satisfaction is guaranteed.

With specific regard to BASIC XE (Ver. 4.0), Mark Taketa of OSS advises purchasers of this product can proceed in one of two ways: a) if purchased from a participating dealer, return the product for a cash refund and pick up version 4.1 when available; or b) return the cartridge and disk to OSS and they'll ship you an update. Mark says OSS also intends to contact everyone who submits a Version 4.0 registration card to ensure they receive updates.

Oh, by the way. How can you tell whether the copy you're buying is the updated version? You're right. You can't tell from looking at the packaging. You'll have to boot it up to see if it's version 4.0 or 4.1.

LATE REPORT: I just received my version 4.1 update. One of the simple commands (INVERSE) which didn't function properly in the original issue still fails to execute the way it should. Upon execution, this command is supposed to send all text to the screen in inverse video. It does. But it fails to recognize "line fees" and merely prints carriage returns as escape characters. The text fills each screen line and wraps to the next line when forced.

Another call to OSS during which I spoke to Mike Fitch. Mike explained that this bug is cartridge related and would probably not be corrected in the near future. He knew of no other cartridge related problems. He did report, however, that two other bugs had been found which had not been corrected on the new 4.10 disk. One involves mathematical computations using a negative exponent -- results will not be accurate. The second involves the use of transcendental functions in a FOR/NEXT loop. For example, the instruction "FOR X=1 TO LOG(Y)" should be avoided. These bugs are being corrected on version 4.11 of the extension disk due for release shortly.

THE HALLEY PROJECT

Tom Snyder Productions, Mindscape, Inc.,
344 Dundee Road, Northbrook, IL 60062
Priced at \$39.99 (discounts available)

The HALLEY PROJECT, a mission in our Solar System, is produced by a subsidiary of SFM, "one of the nation's leading educational publishers for close to a hundred years. (This product) illustrates Mindscape's dedication to producing challenging computer software than combines the best in entertainment value." The scenario is not too unusual. You want to be a starship pilot, but the powers that be demand that you first prove your suitability by "locating and landing on planets and moons, which move across your computer screen in much the same way that they move across our Solar System." Features are said to include advanced computer technology that creates a real-time simulation of our Solar System, an accurate model for learning facts about . . . gravity, atmospheric conditions, orbital motion, relative size, position and orbits of planets and moons, location of constellations, how eclipses work, and Halley Comet and its orbit. The program records the pilot's progress and fastest time, and features high resolution graphics.

ON-TRACK GAMESTAR/ACTIVISION

Priced at \$29.99 (discounts available)

Meant to simulate the slot-car racing sets found under many Christmas trees in the past couple of decades, this new game offers the player "true head-to-head competition against a champion computer racer or a friend . . . go for great handling or turbo-speed . . . on paved tracks for predictable handling . . . dirt tracks for slippery action." You can choose from two types of racing -- best time or most distance. Drivers -- man your cars!

CODEWRITER SERIES**Small Business Inventory****Salesman's Expense****Retail Invoice****Accounts Receivable/Payable****Home Integrator****Atari Corp, Sunnyvale, CA**

This relatively new series of applications programs from the CodeWriter Corporation is being marketed by ATARI and range in price from about \$16.00 to \$26.00. All require 48K, a disk drive and, to be useful, a printer. There is no advertising material available which would be useful in determining the specs of the various programs and the packaging offers no clues other than the program titles, except for the HOME INTEGRATOR package. The latter offers four separate modules:

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- a NAME AND ADDRESS BOOK which assists you in keeping track of business and personal acquaintances, addresses, phone numbers, spouses' names, birthdays, etc. Searches may be made by last name, birthday, etc.;

- a RECIPE FILE which allows you to file recipes with complete directions, number of servings, etc. Searches may be conducted by number of calories, cost per serving, food type, etc.



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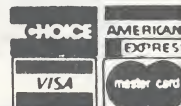


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Learning Through Logo

by Susan Wolff

Being asked to write a monthly column on educational computing and Logo in the schools is a bit overwhelming to say the least. One hardly knows where to begin. So many people are doing such a variety of exciting activities. Quite a few of the Logo-involved classrooms that I have come across have had great moments.

My credentials for this task are diverse. Most relevant among these may be my role as a classroom teacher for Fairfax County, Virginia, the training of other teachers I have done for the county in the use of computers and Logo in their classrooms, and my curriculum development involvement.

I would also like to believe that my "Learning Through Logo" project this past year has been innovative. I have been led to this conclusion by the comments of a parade of observers who visited my fifth grade classroom.

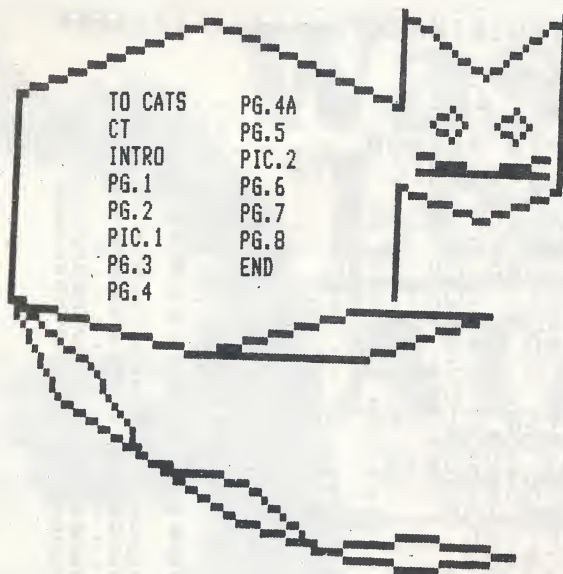
I wanted to give children an educational environment they would "buy into", i.e. a reason to learn. The challenge to the children was: Learn something, master a skill; and instead of ditto sheets, workbook pages, ad

nauseum, write a computer program to share your knowledge with others. They were challenged to design some graphics to illustrate concepts they had mastered and to share their software with a friend. They gained knowledge in the morning and used it in the afternoon. They left proof of their newfound wisdom for posterity!

The children wrote software in social studies, science, reading, math, language arts, and research topics. They used the graphics capabilities of Logo as well as many list processing skills. Logo became their word processor. The results were quite impressive and demonstrate how successful an intensive use of Logo can be.

This coming year I will once again have a technology oriented environment with my Learning Through Logo system and will be sharing insights with you along the way. I will try to answer questions about why Logo is being used in the schools, and what I feel are the most exciting possibilities for our children in this age of technology.

For now I will leave you with one typical sample of what two 10 year old children came up with (that's right, I said 10), after much research and note-taking on a topic they wanted to learn more about; cats. See if you're not impressed!



TO CATS PG.4A
CT PG.5
INTRO PIC.2
PG.1 PG.6
PG.2 PG.7
PIC.1 PG.8
PG.3 END
PG.4

TO PIC.1
CS FS HT
SETPOS [15 -10]
SETPOS [5 -15]
PD
SETPOS [45 -15]
SETPOS [5 -30]
SETPOS [-45 -30]
PU

SETPOS [5 -15]
PD
SETPOS [-45 -30]
SETPOS [-105 -15]
SETPOS [-105 50]
SETPOS [-45 75]
SETPOS [15 50]
SETPOS [15 80]
SETPOS [40 60]

SETPOS [65 80]
SETPOS [65 50]
SETPOS [65 25]
SETPOS [40 15]
SETPOS [15 25]
SETPOS [15 -10]
PU
SETPOS [-105 -15]
PD
SETPOS [-90 -45]
SETPOS [-60 -65]
SETPOS [-35 -80]
SETPOS [-5 -90]
SETPOS [25 -95]
SETPOS [55 -90]
SETPOS [25 -85]
SETPOS [-5 -90]
SETPOS [-30 -70]
SETPOS [-60 -65]
SETPOS [-80 -35]
SETPOS [-105 -15]
PU
SETPOS [25 45]
PD
SETPOS [30 50]
SETPOS [35 45]
SETPOS [30 40]
SETPOS [25 45]
PU
SETPOS [45 45]
PD
SETPOS [50 50]
SETPOS [55 45]
SETPOS [50 40]
SETPOS [45 45]

PU
SETPOS [40 30]
PD
SETPOS [20 30]
SETPOS [40 30]
SETPOS [20 35]
SETPOS [40 30]
SETPOS [60 35]
SETPOS [40 30]
SETPOS [60 30]
PU
HOME
WAIT 250
CS TS CT
END
TO PIC.2
HT PU
SETPOS [0 5]
PD
SETPOS [-10 5]
SETPOS [-25 35]
SETPOS [-25 50]
SETPOS [-35 40]
SETPOS [-45 45]
SETPOS [-40 50]
SETPOS [-35 40]
PU
SETPOS [-45 45]
PD
SETPOS [-50 45]
SETPOS [-60 35]
SETPOS [-50 20]
SETPOS [-45 0]
SETPOS [-40 -40]

SETPOS [-40 -45]
SETPOS [-45 -45]
SETPOS [-45 -50]
SETPOS [-35 -50]
SETPOS [-35 -15]
PU
SETPOS [-25 -15]
PD
SETPOS [-25 -45]
SETPOS [-30 -45]
SETPOS [-30 -50]
SETPOS [-20 -50]
SETPOS [-15 -25]
PU
SETPOS [-20 -50]
PD
SETPOS [0 -50]
SETPOS [35 -50]
SETPOS [55 -30]
SETPOS [65 5]
SETPOS [65 25]
SETPOS [65 40]
SETPOS [60 40]
SETPOS [55 35]
SETPOS [55 0]
SETPOS [45 -25]
SETPOS [35 -40]
SETPOS [25 -20]
SETPOS [0 5]
PU
SETPOS [-45 40]
PD
SETPOS [-40 35]
SETPOS [-45 30]
SETPOS [-50 45]

A Comparison of the 68000 and 6502 Microprocessor Chips by Jim Parks

General

As most of the world is now aware, Atari now has two lines of computers. The main difference between these two lines (other than cost) is the microprocessor used in each. The original, consisting of the 400, 600, 800 and 130 variations of the XL, XE and plain vanilla lines, uses the 6502 microprocessor chip. The second, newly introduced line, is the ST line consisting of the 260ST and 520ST, uses the Motorola 68000 microprocessor. This article will examine some of the differences between the two microprocessor chips used, without examining the actual computer themselves (plenty of that will be available soon). A certain amount of computer architectural knowledge will be helpful in reading this article.

The 6502. The Atari 800 et. al. uses the 6502 microprocessor chip, the same used by the Apple II line, Commodore and many other home computers. The 6502 was introduced by MOS Technology, Inc. (a group of former Motorola engineers) in 1975 as an alternative to the Motorola 6800 microprocessor. Although it did not break any new technological ground, it had one major advantage over the existing microprocessor chips, it was CHEAP! The 6502 could be obtained for about \$25 (about \$5 now) when other equivalent chips were running several hundred dollars each. For this reason, it rapidly became a favorite for 'home brew' and hobbyist computers. It was, however, a simple chip even in its day (which itself is regarded as neolithic). It has a total of 56 operation codes and is limited to working with 8 bits at a time. As would be expected, various enthusiasts derived ways to get around the 6502's limitations.

The 68000. The Motorola MC68000 microprocessor was the result of a project known as "Motorola's Advanced Computer System on Silicon", or MACSS (hence Macintosh?). When the MC68000 was introduced by Motorola in 1979, it was intended to represent the current state of the art in microprocessor design. It had more and larger registers, greater addressing capabilities and more refined operation codes than most microprocessors of its day, while providing the capability of adding features in the future as technology progressed.

The overall computer climate had changed substantially between the release of the 6502 and the 68000. When the 6502 was introduced, the major costs in microcomputing were hardware related. Memory, peripherals and almost everything else was expensive. Therefore, the way to make a cost efficient computer was to produce inexpensive hardware. This is exactly what MOS Technology intended to do and the proliferation and success of the many 6502 based computers shows the effectiveness of this strategy at that time.

By the time the 68000 was released, the industry had changed significantly. Computer memory was becoming larger and very inexpensive, peripherals were readily available and microcomputers for business were becoming a necessity. The major costs associated with microcomputing

were no longer in hardware but were, instead, in software production. Therefore, in order to have a cost effective computer, it was necessary to have an easily programmable microprocessor. The 68000 was designed with this understanding and most of the trade-offs and compromises necessary in computer design were made with the programmer in mind.

The development and release of the 6502 by MOS Technology was basically driven by an immediate need to produce and sell an inexpensive chip. By the time the 68000 was created, chip design had become more complex and the costs associated with design had become a significant factor in hardware costs. The number of possible transistors per chip had increased by an order of magnitude while commitments made to specific microprocessor designs meant that major changes to those designs made peripherals and software packages unusable (it is this base that keeps the 6502 computers popular). Therefore, the 68000 architecture was designed to be upgradable without restructuring the design and without loss of compatibility, as will be demonstrated later.

Buses

A bus is basically a set of lines which transmit signals. The 6502 microprocessor has three bus structures. The data bus is a bi-directional 8 bit bus. The address bus is mono-directional and 16 bits wide. The control bus carries the various synchronization and control signals such as read/write, ready, interrupt and non-maskable interrupt requests, opcode fetch, etc. This overall bus structure determines many of the characteristics of the 6502. For example, it is only able to address a maximum of 64K (2¹⁶) main memory at one time due to the 16 bit address bus. Furthermore, the once blinding speed of the 8 bit computer has become something less than impressive when compared to the newer 16 and 32 bit computers.

The internal and external data buses of the 68000 are 16 bits wide and the ALU (Arithmetic/Logic Unit) is 16 bits. It has a 24 bit external (32 bit internal) address bus structure, 32 bit registers and is able to handle 32 bit operands and data types. It is interesting to note that of the two major 6502 manufacturers releasing 68000 machines, Apple is calling theirs a 32 bit machine while Atari refers to theirs as a 16 bit machine (supposedly, the ST in the new machines stand for sixteen/thirty-two).

As noted earlier, Motorola wanted to make the 68000 upwardly compatible with later chips. The designers were aware that one of the largest failings in new chips was limited memory expansion. Therefore, Motorola implemented a 32 bit internal structure while using only a 24 bit external address bus. This kept the total number of external pins to 64, which was a feasible number based on the available technology at the time, while allowing the 68000 to access up to 16 megabytes of main memory. The full

implementation of 32 external bits (as used by the later 68020) allows access to 4 gigabytes of memory!

The designers of the 68000 made the decision to make the I/O (input/output) interface 8 bits. The rationale behind this decision was twofold: (1) most I/O operations were 8-bit oriented and (2) there was a large base of 8-bit (6800) peripherals in existence while 16 bit compatible peripherals might require year(s) to develop.

Instruction Sets

The 6502. The 6502 instruction set, with 56 operation codes (opcodes), is limited even for an 8-bit computer. For example, the only addition statement is ADC (add with carry). Similarly, there are no multiplication or division codes, clear codes (except for status registers), negate or compliment codes or other commands one might normally expect to find. Many of the 6502 opcodes have an implicit operand (source or destination location). For example, STA, STY, and STX all perform the same function but on different registers and with one explicit operand (e.g. STA LOC1). There are no provisions for direct memory to memory transfer.

The 68000. Since the 68000 was intended to be a programmer's microprocessor, Motorola made a conscientious effort to provide consistency in both the types of opcodes available and the method in which they operated. There are only a few more actual discrete opcodes (59) in the 68000 but there is a tremendous difference in the approach to using these opcodes and the power available from them. There are no implicit operands in the 68000 instruction set. However, the 6502 opcodes LDA, LDX, LDY, PHA, PLA, PHP, PHL, STA, STX, STY, TAX, TAY, TSX, TXA, TXS and TYA are all handled by the single operand MOVE in the 68000. Since transfers between one location and another are the single most common operation in any program, Motorola decided that the simplest way to implement transfers was to use one command and specify locations through the operands. The small efficiency lost through the use of an implicit operand is more than compensated for by the flexibility in dealing with many different types of operations in a consistent manner. To increase the effectiveness of MOVE and other instructions, the data length (byte, word or long word) is specified by a suffix. For example, MOVE.B transfers a byte (8 bits), MOVE.W transfers a word (16 bits) and MOVE.L transfers a long word (32 bits). This convention is used with other instructions as well, allowing the programmer to keep track of only a few simple rules rather than special cases for each mnemonic and special mnemonics for individual situations.

The flexibility of the MOVE statement also allows any of the eight address registers (described further along) to be used as stack pointers, thus avoiding complicated and wasteful register swapping. There is also a MOVEM command which allows the moving of any or all of the sixteen data and address registers, MOVEP (move peripheral data), MOVEQ (move quick with small constant) and other variations. All of the above, and many of the remaining instructions can be used with any of the allowable addressing modes (where logical) and data length modes. The combination of various addressing modes and movement vari-

ations allows a total of 34,888 different ways to move data and all allow the data length to be specified as a byte, word or long word.

The above discussion not only shows the power of the 68000 opcodes when combined with possible permutations but also demonstrates the attempt at uniformity. Although not all possible permutations exist with all opcodes, an effort has been made to standardize the method in which all data can be manipulated. For example, all instructions which handle data can choose between a byte, word and long word, with default being a word. As a further example of Motorola's intent toward future compatibility, the original MC68000 specifically left one-eighth of the instruction set unimplemented. This allows future chip releases to take advantage of Advanced Technology while remaining compatible with earlier chips. In actuality, the MC68020 uses some of these available instructions to implement its cache memory, virtual memory and additional addressing modes.

Registers

The 6502. The 6502 has an 8-bit accumulator, two 8-bit "plain vanilla" general registers (X & Y), a sixteen-bit stack pointer (S), a sixteen-bit program counter arranged as two 8-bit registers (PCL and PCH) and an 8-bit instruction register. The ALU unit is 8 bits.

Since the 6502 is an accumulator microprocessor, all data type operations pass through the accumulator register. The 6502 type of architecture is often described as a "bit banger", as opposed to later "number crunchers". In other words, the architecture is designed to move a large quantity of bytes rapidly rather than work with longer forms of data. A bit banger design also requires that large numbers of bytes be moved, which is inefficient in the long run.

The 68000. The 68000 is a general register microprocessor (many available registers for operations rather than just the accumulator register). Since the 68000 was designed around programmers' needs, and programmers generally spend a lot of effort transferring data between registers in order to store it for future use, Motorola tried to put as many registers as was practical (taking into account that additional registers and control circuits add significantly to chip cost and complexity). Specifically, the 68000 has a total of sixteen 32-bit registers, divided into eight 32-bit general data registers and eight 32-bit general address registers with a slight degree of interchangeability between the two. The last address register (A7) is reserved as a stack pointer, although any or all of the address registers can also perform this function. It was felt that sixteen registers would meet the needs of most applications and reduce memory accesses, thus increasing speed. The data registers differ from the address registers primarily in the manner in which the status registers are affected by different operations. For this reason, the Motorola engineers specifically excluded certain types of operation codes which might have affected the integrity of the information being stored in an improper manner.

Miscellaneous

Memory Arrangement. The 6502 uses memory paging. In addition to being simple to implement, paging also provides greater speed and shorter code. However, paging also requires that the programmer keep track of what page he is on and requires additional coding when pages are crossed. Thus, programs for paged memory are either short (on one page) or unduly awkward.

The 68000 uses linear addressing. This is the most direct form of addressing and is the method preferred by most programmers. In linear addressing, all memory is directly addressable by the programmer. In addition to avoiding the limitations of paging, segmenting, banking and other divided forms of memory arrangement, linear addressing also facilitates memory expansion in future designs.

Speed. The speed of the standard 6502 chip is 1 MHz while the 68000 clocks in at 8 MHz. However, this only partially indicates the speed advantage of the 68000. Since the 68000 has a 16-bit data bus, it is able to bring in twice as much data per pass. Furthermore, since data types can be specified as a long word (32 bits), the 68000

can access four times as much data per instruction fetch. To increase operating speed even more, the 68000 uses a prefetch system which obtains the next opcode while the current instruction is being executed, thus eliminating most of the instruction fetch time throughout the program (this results in a minimum of four clock cycles per instruction execution since this is the time required to fetch the next instruction). There is a certain amount of speed lost due to the use of all external operands but this is insignificant and, as discussed before, the benefits to the programmer more than compensates for the time lost.

Conclusion

Now that some of the relative merits of the two microprocessors have been examined, which of the two lines of computers might be right for you? I am a pragmatist and don't believe in buying more than I actually need or can use. Thusfar, I have found very little that my old 800 can't do and actually prefer it in some respects over the \$4,000 system I use at work (excluding 80 columns and hard disk). BUT, I sure would love to own a 520ST!

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The 520ST Computers Arrive

By Jack Holtzhauer

Many of you who real ATARI addicts have probably heard a number of stories regarding problems with the new 520ST units purchased through ATARI's users' group offer. Some of what you heard was probably true. Some probably wasn't. Hence, the following.

First of all, the units were not shipped as quickly as we had hoped they would be. Why? A couple of reasons. FCC approval was not granted as quickly as ATARI assumed it would be. When the FCC finally issued its stamp of approval and the units were being readied for shipment, a users' group check allegedly bounced causing ATARI's finance department to insist that shipment be delayed until our checks cleared.

After those hurdles had been resolved, ATARI tried to get the units to the users' groups as quickly as possible. How? By going to the extra effort and expense of shipping most by two-day air express. ATARI's good intentions in this regard may have back-fired, as you'll see below.

Of the three units finally received by WACUG, none worked on initial boot-up. Joe Waters had told me that Larry Brown of ATARI was the man to talk to about our problems. When I called Brown's office a nice, courteous sweet-young-thing told me that I had been given erroneous information. Mr. Brown's wasn't handling 520ST problems - they were being handled by "Mr. Smith". In any case, both Mr. Brown and Mr. Smith were "in meetings" and not presently available. She promised Mr. Smith would return my call.

Sure he would! I figured I was far from the first one to call, problems were rampant, and that ATARI's folks had run for the hills. Not so! Within five minutes sweet-young-thing called back, told me that Mr. Brown was, indeed, handling the 520ST problems and that she had been asked to pass on some trouble-shooting suggestions on his behalf. She explained that the problems we were experiencing were probably caused by IC's which had become un-seated during shipment. She suggested that I open the units, remove the RFI shield, re-seat the plug-in IC's and "don't worry about voiding the warranty." She suggested I give Mr. Brown another call if this solution didn't work.

We followed ATARI's suggestions and got two of the units up and running. Another call to sweet-young-thing resulted in a promise that Mr. Brown would call back that afternoon. Sure he would!

He did! Not only that, but he put one of his 520ST engineers on the phone and we spent 45 minutes pursuing various fixes for our ailing unit only to finally come to the conclusion that its condition was terminal. My engineering friend promised Mr. Brown would call back within an hour to arrange for a replacement. Sure he would!

He did! He suggested that I pack-up the DOA, return it by UPS and that upon receipt a replacement would be shipped. I told Mr. Brown that I was most pleased that ATARI had gone to the extra expense of shipping our units

to us by express air freight and that the efforts of his staff in helping solve our problems were notable and appreciated. However, I also told him that I thought ATARI should take one additional step with regard to the DOA's - make the replacement procedure as easy and as cost-free as possible for the users' groups. How? By shipping the replacement units immediately and arranging for pick-up of the defective units at that time. He agreed.

WACUG's experience with 520ST failure has been mirrored by a number of other users' groups who have reported on their own experiences in their newsletters. All but one of the problems reported involved the computer, itself, and most were resolved by re-seating the IC's. One group reported a monochrome monitor being DOA. Closer to home, four of the eleven units received by NOVATARI failed to work on initial power-up. Two were fixed by re-seating the IC's and two had to be replaced.

What's the tie-in between these failures and ATARI's efforts to get the units to users' groups by using express air-freight? One representative of a local software house visiting ATARI headquarters was advised that pressure sensitive tape had been used to help seat two of the larger IC's and that cold temperatures experienced during air shipment caused the tape to swell, unseating the chips.

By the way, all users' groups reporting problems have indicated that their replacement units have functioned properly on initial power-up. That has also been the experience with WACUG's and NOVATARI's units.

You say you've also heard that some 520ST monitors were recalled as lacking FCC approval? The story's partially true. A number of monitors shipped to a Washington, D.C. area distributor were, in fact, recalled. They had been mis-shipped. They had been intended for sale in Canada, not the States, and were not the FCC-approved models.

So, in short, it's true that a significant percentage of the 520ST's received by users' groups failed to operate properly on initial power-up, that most of the problems involved un-seated IC's, and that ATARI's actions in response to the problem could be described as being more than merely adequate. It's also quite possible that the failures may never have occurred had not ATARI decided to speed up users' group delivery by using air freight.

Without addressing what many of us feel were other short-comings in ATARI's users' group offer (initially no offer of a color monitor; elimination of the "one free if you buy 10" offer; hesitation in promising the OS in ROM adaptation), things seemed to have turned out alright. Now, when do we receive our \$50 rebate checks?

Late Report: The rebate checks arrived on August 19! The accompanying letter also stated that BASIC would be available at the latest by early September and reconfirmed that the OS would be supplied on ROM free to user group purchasers (no date mentioned).



PaperClip Revisited

by Daniel L. Moore

[The following comments were submitted by Daniel Moore, the author of PaperClip, in response to the review of PaperClip in last month's CURRENT NOTES. Ed.]

This is a response to the criticisms and problems that you had with Atari PaperClip. The responses are in the same order as the comments in the review.

Problem defining the page numbering. The example on page 65 of the manual is correct. Unfortunately many people type the commands in on the same line, there should be a [RETURN] after the end of the footer (and header) command string.

Setting the page length. The command given in the manual is wrong. It is correctly given in the help files and in the appendices. This will be fixed when the new manuals are printed.

Print preview. There is a bug in version 1.0 that causes a 'spare' line at the top of the page. This was fixed in version 1.1. At no time was the statement made that the total lines in the preview window is the same as the number of lines on a page.

Typing speed. Version 1.1 has a 20 character type ahead buffer that solves the dropped character problem. Version 1.2 uses a new reverse wrap algorithm which makes the backspace/delete character commands MUCH faster.

Printer driver for the Panasonic 1091. I have never seen a printer that is 'fully' Epson compatible besides another Epson. (Compatibility is claimed by lots of printers. What they usually mean is that the Epson commands for emphasized text, underlining, and single density graphics work.) This is not a problem in PaperClip, but a problem with printer ads. There are literally thousands of printers on the market so there is no way we can provide printer config files for all of them.

If a person is unable (or unwilling) to create a printer config file for his specific printer I will create one for him if he will send me a copy of the manual. The only restriction is that I will then upload the file to SIG*Atari on either CompuServe or DELPHI, I will not mail him a copy of the config file. (This is due to lack of time, I can't afford to waste time mailing disks to people.)

Available printer fonts. I agree it is hard to tell what fonts are (or are not) available with a specific printer config file. Unfortunately there is no 'GOOD' place to put this information. It would be very hard to put this information in the manual and to keep it accurate. (This is due to the long lead time between when the manual goes to press and the program ships with that copy of the manual.) Unfortunately there is not enough room on the version 1.0 or 1.1 disk to have either an example print file or a list of all config files and the features of each. Since version 1.2 will be shipped on double sided

disks an example file that will demonstrate ALL PaperClip printer features (and fonts) will be included.

Creating a printer driver. You can use control up/down arrows to move through the file one question at a time. You DON'T have to hit CR 151 times to reach the user defined commands.

User commands in version 1.0 didn't work as documented. This was due to an oversight on my part. Steve Harding (the author of the manual) documented them as being an 'immediate' command when in fact they were 'line' commands (ie. they execute before the text on the line is printed.) This was changed in version 1.1 so they now operate exactly as documented. Also version 1.2 adds user definable commands via the new control-X command.

Bold face printing. This is not a problem with PaperClip, but a limitation of Epson and most 'Epson compatible' printers. Microspacing on these printers is implemented using graphics commands. Graphics and double strike text can't be mixed on the same line. (This is an undocumented limitation of Epson printers.) This left two methods to generate bold face text:

1. Use the emphasized print command. This only works for 10 pitch text, but it is fast. (This is the method that was used on the version 1.0 config files.)

2. Use the backspace command to reprint the character in the same position. This is not as 'bold' looking but it will work in all pitches. (This is the method used on the version 1.1 and 1.2 config files.)

Mixing fonts. Once again exactly where should this be documented? If it was in the manual there would be a several month delay between the appearance of a new config file and the new manuals becoming available. (All the old manuals must be used first.) The version 1.2 disk has an example file that lets you see all the fonts and margins if you print it out. The version 1.2 disk also has a utility to print the contents of a .CNF file. You can then see exactly what margin settings are used.

I assumed (maybe incorrectly) that people could remember what changes they made in PaperClip before saving a new copy to disk. If this is a real problem I would suggest writing this information on the diskette label.

Every word processor I have used on an 8 bit computer requires you to reset the margins immediately after a font change. PaperClip saves you from this for most font changes. All you have to do is set the default margins to those that you use most often. (This could be 1 inch or 1/2 inch or whatever. There is NO requirement that the margin settings in the config file generate a 1 inch margin, that was chosen since it is the most commonly used.)

Block moves. Version 1.2 forces you to hit 'M', 'C', 'D' or ESCAPE when at the MCD prompt. Any other key that is pressed is ignored.

Cut and Paste. The cut and paste function of PaperClip is derived from the FLASH (Action! editor) cut and paste routine. It is designed to complement the block move (control-shift M) functions by allowing large blocks to be moved. If all you want to do is move a single sentence you should use the control-shift M function instead.

Cursor movement. If all he wants is to get to the CR that is at the start of the line, then hit ctrl-shift-< (start of line command).

Appending files. There is NO merge file routine in PaperClip. There is an append file option. This is fully explained in the manual. If you want to merge two files, just read the second file into the second window and cut/paste into the first file.

DOS commands. Version 1.2 allows the user to directory drive 1 or 2 from the DOS prompt.

Word count. The word count feature is not intended to be 100% accurate. It is actually a space counter (which is documented in the manual). It is usually within 10% of the actual value.

Indent/outdent. An outdent command (control-Z0number) has been added to version 1.2

Tab. How is PaperClip supposed to tell if a number is the tab map number or text to be printed. This applies to ALL numeric entry options (margins, headers/footers, user command numbers, etc.). The manual mentions this and suggests putting a space (or hard space) between the number and the text. The columns are specified from the left edge since all other column values (margins, etc.) are also entered this way. It helps makes things consistent through out the program.

Windows work exactly as documented. The ctrl-shift-D command deletes the CURRENT window. Current meaning which ever window the cursor was in. If you are not sure which window, answer 'NO' at the delete prompt and then make sure. The cursor doesn't move from window to window until you RELEASE the SELECT key.

133 errors. Version 1.0 occasionally will generate a 133 error when writing to an existent file on the disk. This was fixed in version 1.1.

Double column printing. The double column printing works correctly in all versions of PaperClip. The effects described are due to not following the EXACT directions to start the second column. You must specify ALL of the new margin commands on the same line.

If someone wants me to generate a custom printer config file for them send a copy of the manual to: Daniel L. Moore, The 4th Works, Inc., 7596 West Jewell, Lakewood, CO 80226. CompuServe id: 74035,243. DELPHI id: DLM

Since I will not have a printer to test the file on, I can not guarantee that it will work the first try. And remember the ONLY way I will return the generated file is

via CompuServe or DELPHI. (Also I can't guarantee an immediate response, the jobs I do for free gets done after the jobs I get paid for.)

SYNFILE+ - 64K VERSION

By Jack Holtzhauer

I know many of us who own 130XE's are impatiently waiting for SYNAPSE to release new versions of SYNFILE+ and SYNCALC which make use of the 130XE's bank-switching capabilities. But did those of you who own an 800XL know SYNFILE+ is now available in a version which makes use of the extra 16K RAM afforded by this unit?

A couple of weeks ago I had occasion to trouble-shoot an associate's SYNFILE+ data disk that had died because the .IDX file had become scrambled. When the same problem arose several days later, I determined that the program disk was at fault, called SYNAPSE and arranged for a replacement.

When the new disk arrived it bore a label indicating it was a "64K version". When my friend booted the program on her 800XL she found that a data file previously having a max capacity of 547 records could now hold 877. Not only that, but the new program disk came with a new utility disk providing "fast copy" and DATA-PERFECT/SYNFILE+ conversion routines.

Another call to SYNAPSE elicited the information that current versions of SYNFILE+ do, indeed, utilize the extra 16K provided by the 800XL and that owners of the original versions can get the up-date by forwarding their program disk to SYNAPSE with a check for \$7.50 - - no charge for programs still under warranty. If interested, contact SYNAPSE at 5221 Central Avenue, Richmond, CA 94804 (415-479-1120).

FACE and SMAUG join WAACE

I am pleased to announce that two new clubs have joined the CURRENT NOTES family. The Frederick Atari Computer Enthusiasts (FACE) and the Southern Maryland Atari Users Group (SMAUG). Information about FACE is listed in the back with the other clubs. We didn't have enough time to include the SMAUG listing on the back, but it will be there next month. Therefore, I'll take this space to tell you that the club meets on the 1st Thursday of each month at the John Hanson Middle School in Waldorf, Maryland from 7:30 to 9:00. Any interested in more information on SMAUG should contact Dorothy Leonardi (301) 839-1363.

Any other clubs in the Washington area that might be interested in joining WAACE should contact Joe Waters (703) 430-1215.

The Writer's Tool

Reviewed by Joe Waters

[Optimized Systems Software, Inc., 1221B Kentwood Avenue, San Jose, California, 95129 (408) 446-3099 \$79.00 (Discounts are available)]

OSS has a well-deserved reputation for producing quality tools for the Atari. From a history that dates back to the design of the original Atari BASIC, OSS has provided BASIC XL for BASIC programmers, MAC 65 for assembly language programmers, and ACTION! for those who want a powerful structured language for the Atari. And now, for the writers in the audience, OSS has produced The Writer's Tool.

Documentation. This word processor comes packaged like the other OSS products in a bright yellow three-ring nine-inch binder. The documentation, which is nearly 200 pages, consists of a "Tutorial" and a "Reference Guide."

I must confess that, although I certainly like the look of the packaging -- it makes an attractive addition to your book shelf -- 200 pages is still 200 pages which is considerably more than the documentation provided with AtariWriter. If you ignore it and just boot-up the Writer's Tool, you won't get very far before you are stuck. You need to read the documentation. If you have already struggled through learning AtariWriter, you understand the process. Although it may be a little slow at first, eventually you master your word processor and become proficient at writing letters and documents on your computer.

If you are already using a word processor, why consider a different one? Why go through that whole learning process again? Because your time is valuable not only in learning to use a word processor but also in the day-to-day process of actually writing. The time you invest in learning a tool is a one-time capital investment. Day-to-day usage, however, is like an on-going expense. If you do a lot of writing, features available in the more advanced word processors, although they may take you a little while longer to learn, will repay your investment many times over as you use the tool to write your papers.

All of the documentation provided with the Writer's Tool is very well done. Whether reading the tutorial or the reference manual, most writers will have no trouble understanding the message. The tutorial provides examples, some of which are on the disk, to help you follow the explanations. However, the format tackles each subject in some depth before going on to the next. This means that you really have to work through the entire 100-page tutorial before you discover all the basic features available. I would have preferred a different approach. Let the tutorial show me how to produce several typical documents (letters, memos, table or list of data, etc.) Introduce only those commands and features that would be used in writing these documents. This would get users up and going in a short time and would provide them with 90 percent of all the commands or features that they would normally use. As users get more comfortable with the

system, they could always consult the reference manual when a special case suddenly arises.

The Writer's Tool Disk. The language is provided on cartridge and disk. Note: not one or the other. You need the cartridge in the computer and you need to boot-up with the Writer's Tool (WT) disk. Version changes are handled via the disk (which is not copy protected). I originally received Version 2.0. This review is based on the latest update: Version 2.2. There are several features of the Writer's Tool that are external to the cartridge such as a spelling dictionary, and screen and printer customization programs. These programs as well as 16 printer-driver files and several demonstration text files are included on the Writer's Tool disk.

Using the Writer's Tool. Let me give you an overview of how you would use the Writer's Tool. Put the cartridge in and boot-up with the WT disk. Once you get started, you do not need to keep the WT disk in the drive. You can replace it with a data disk (or if you have two drives, put the data disk in drive 2).

You are greeted initially with a blank screen with the single word OPTION at the bottom. If you press the OPTION key, a four-line window opens up at the bottom of the screen showing you the various options in the main menu (Search, DiskIO, Print, Clear, Edit, Xternal). To leave the menu and return to editing, you would press E for Edit.

Disk I/O Functions. Let's look at the disk input/output functions. Press D and the Disk I/O system appears on the screen (see figure 1).

```
=====
DISK I/O System
COMMANDS:
  DIR (Directory for disk 1 or 2
  LOAD Memory from Disk File
  SAVE Memory to Disk File
  DEL (Delete) Disk File
  INIT (Initialize) Drive or Disk

POINTERS: (Used by LOAD, SAVE)
  CURSOR TXTEND MEMEND SPACE
    000    000 23,839 23,839

1 2(DIR) Load Save Del Init Edit
=====
```

Figure 1

Let's assume you just put a new disk in drive 2. Press I to go to the INIT option. You will be asked: "Which Disk Drive (1 or 2)?" Answer 2. You will then be prompted: "Set Drive Density: Single Double or Initialize Disk". Ah ha! You can use the INIT option to set drive densities as well as formatting a disk. Suppose you change your mind at this point and don't want to initialize anything. Press ESC. Nothing happens. Too bad. You have to choose something. For our example, we could press

I to format the disk. If you don't want to format, press S to set density to single and return us to the Disk IO menu.

Want to see what's on drive 1? Press 1. For drive 2, press 2. The directory is shown (in two columns) on the top part of the screen while the menu options remain on the bottom. If you now want to load one of the files, just press L for load and you will be prompted for a filename. Since the directory remains displayed on the top of the screen, you should have no trouble typing in the name of the file you want to load.

Note: although you can delete a file, you cannot rename, protect, or unprotect files from this disk IO system. You could accomplish rename by loading a file and saving it under a new name and then deleting the old name. These are common DOS functions that would have been usefully included in this subsystem.

Writing Your Document. Since you are just starting and don't have any files to load, press E to return to Edit mode. Now just write a few paragraphs. Like most word processors, you need only press the RETURN key when you finish a paragraph. If you want an extra line in between paragraphs, press RETURN twice.

You'll note that even if you can type very fast, the Writer's Tool has no trouble keeping up with your fingers. If you want to make any changes, use the standard CONTROL + an arrow key to move the cursor up, down, left, or right. The box that serves as a flashing cursor indicates where your next character will appear on the screen. It also indicates that you are in TYPEOVER MODE. Move the cursor to the middle of a sentence and start typing. You will type OVER the text on the screen.

Press CONTROL+I to go to INSERT MODE. Note that the cursor has now switched to a flashing vertical bar. If you type in the middle of a sentence, your new characters are inserted into the text while the old text is pushed to the right. Press CONTROL+T to go back to TYPEOVER MODE. CONTROL+I, CONTROL+T, you can switch back and forth from one mode to the other anytime you want.

Cursor Movement. Assume by now that you have typed five or six paragraphs. Want to go back to the Beginning of the document? Press CONTROL+B. To go to the End, press CONTROL+E. Let's go back in Reverse toward the beginning a page at a time. Press CONTROL+R. The cursor jumps to the top of the screen. Press CONTROL+R again and the screen jumps another 20 lines. Go back as many screens as you want. Press CONTROL+F to jump Forward a page at a time.

How about moving the cursor back and forth in the middle of a sentence? You move a character at a time by hitting CONTROL + the left or right arrow. However, if you want to go faster, CONTROL+A moves you to the extreme left; CONTROL+Z moves you to the extreme right. Not quite that fast? Try CONTROL+W to move along the line a Word at a time.

Deleting Text. Let's delete something. The standard Atari delete process still works just fine: backspace deletes the previous character and CONTROL+DELETE deletes the character under the cursor. SHIFT+DELETE deletes the entire line the cursor is on. One unique feature of the Writer's Tool that I have found quite convenient is the ability to delete all the spaces from the cursor to the next character. If you have ever had to edit a document and remove a lot of blank space, you will see how useful this feature can be! Want to delete an entire word? Position the cursor at the beginning of the word and press CONTROL+D.

Whoops! Wrong word? Press CONTROL+U to Undelete whatever you just deleted. What's that? You deleted three things you didn't mean to delete? No sweat. CONTROL+U brings the first one back. Pressing CONTROL+N repeatedly will bring back the second, third, fourth and fifth deletions. You deleted more than that? Sorry, you're a hopeless case. Five is the most you can recover.

If you want to delete, (or copy) a larger section of text, position the cursor at the beginning of the text segment and press CONTROL+M to Mark the position. Everything character from that point on will be converted to inverse video. Move the cursor to where the block of text that you want to move ends and press CONTROL+M again. Now only the block you want to affect is marked in inverse video. Move the cursor anywhere you want and press CONTROL+C to copy that block. You can keep copying it as many times as you want. If you want to delete that marked block, enter CONTROL+X and it will disappear.

If you want to delete the entire document or a major part of it, use the Clear option from the Main Menu. You can clear out the text from the cursor to the beginning or end of the document.

You just deleted the marked block by mistake? Press CONTROL+U and notice that the marked block did not come back. The Undelete only applies to deleted lines or words. If you are going to be deleting willy-nilly, you better save your file often.

Saving Your Work. Press OPTION, go to DISK IO, and choose the Save option. Notice immediately the warning you are given. Only text from the current cursor position to the end of the document will be saved. To save the entire document you have to position the cursor at the very beginning. Many people are likely to forget to do that. Therefore the system asks you whether or not you want to save only part of the document. If you respond No, it will ask if you really meant to save all text. If you answer No, you are put back in Edit mode. If you answer Yes, you are asked to verify the filename (it remembers the last filename you used) or supply a new one.

Printing Your Document. Press OPTION and then choose the Print function. The PRINT SYSTEM pops up on the screen (see figure 2).


```
=====
PRINT SYSTEM
```

```
FORMAT CONTROLS: VIEW-> PRINT V 0
```

```
PAGE LENGTH P 66 PAGE NUMBER W 1
```

```
LINE SPACING S 1 LINE LENGTH L 64
```

```
FOOTER LINE B 56 LEFT MARGIN M 8
```

```
CHAR. FONT F 1 INDENT I 0
```

```
SINGL SHEET W 0 JUSTIFY J 1
```

```
TABS DOUBLE COL. X 0
```

```
T 5,10,20,30,40,50,60,70
```

```
Group n Lines: .Gn
```

```
Split Justify: Left\Right
```

```
Alternate,Center: .A, .C
```

```
Defaults,Eject: .D, .E
```

```
Header,Footer: :H, :F
```

```
PRINTER: GENERIC WORDS: 064
```

```
Fmat Print Link Merge Chnge Edit
```

```
=====
Figure 2
```

My goodness! What's all that? See, I told you you had to read the manual! Let's ignore it all. Press P to choose the Print option. (By the way, be sure your printer and interface -- if needed -- is on.) Nothing happened? It's that cursor again. I'm afraid it only prints from the cursor to the end of the document. Go back to the EDIT mode and move the cursor to the beginning and then try printing again.

Now, if there is any justice in the world, you should see your text come pouring out on your printer. It will be in PICA (10 characters per inch) and will have a line length of about 6.5 inches with an even right margin.

Print Preview. Let's try it again, but this time we want to see the text on the screen before it goes to the printer. Choose the Format option. The PRINT SYSTEM will prompt you to enter the format. Of course, you don't know formats yet, so just enter ".v10" which says you want to View the first 10 pages on the screen. Note that the value of the V parameter is changed on the PRINT SYSTEM screen. Now press P to Print your document.

Device not responding? Oh, yes. Even though you are going to view the document on the screen, you have to have your interface and printer ON. Not only does the printer have to be ON it has to be ONLINE. Fix things up and try printing again.

There. Your formatted document is now scrolling across the screen. If you want to stop it, press P for Pause. You'll notice, of course, that you can only see the first 40 columns of your document. Want to scroll over and look at the right half of the page? Can't do that. All you can see is the left half. Bummer. How about scrolling up to see the part that just went by? Nope. Only forward. How about starting the print preview on Page 6? Nope. Page 1 or nothing.

You can start printing on a page other than one. Assume you wanted to start on page 3. What you do is preview on the screen the first 2 pages and then start

sending text to the printer. Want to print only pages 3 and 4? Well, you better be handy with the Pause option to get the printer to stop after it finishes page 4 otherwise it will keep printing until the end.

All of the discussion above, hopefully has given you some idea of what it is like to work with Writer's Tool. We explored virtually all the facilities of the Editor which is quite excellent. My only reservation is the implementation of the Search and Replace option. You can choose a phrase to search for and a new phrase to replace the old one. However, there is no global replace command. With every occurrence found, you must respond whether or not to Replace that item, Skip it, or Quit searching. I like having the option to selectively replace. But I regularly use a global replace option and wish it were included.

Formatting Your Document. In looking at the Print System, we got a vague idea of how the WT handles formatting options. You can change any of the format parameters in the Print System just as we did with the View option. However, they do not remain changed. After every print, they go back to the default values. If you want values other than the default, it is best to imbed the format statements in the text. Any formats in the text override the parameters set in the Print System.

Formats are interspersed with the text. They take the form of a one-letter command followed (in some cases) by a numeric parameter. Format lines are distinguished by a period in column one. Thus, to center the next line of text you would enter:

```
.c
This is a Title
Normal text continues here...
```

You can put more than one format on a line. At the beginning of the paper, you could specify a page length of 66, bottom margin starting at line 56, left margin of 8, and a line length of 65 characters with the following line:

```
.P66 B56 M8 L65
```

If you don't specify anything, the default parameters are applied. You can see the default values in the PRINT SYSTEM screen.

Printer Drivers. Initially, Writer's Tool is set to use a GENERIC printer driver which should work on most printers since it doesn't use any special printer features (like boldface or italics). Printer driver files supplied with the system end with an extension of ".PPP". If your printer is among the drivers supplied, you can rename it or copy to a new file with the extension ".PDF" for Printer Default File. Everytime you boot up with the WT disk, this printer driver will be automatically loaded. If your printer is not supported, you can build your own printer driver file. However, you'll have to have an in-depth understanding of how your printer works -- and given most printer manuals -- that is a non-trivial task!

Highlighting Text. In addition to normal text, the Writer's Tool supports six additional commands that affect

the appearance of characters printed on a page. To implement any of these format changes, you press CONTROL+SHIFT plus an additional key (E for emphasized, D for double-strike, I for italics, W for wide characters, U for underline, up arrow for superscript, and down arrow for subscript). These format changes can be turned on and off at will anywhere in the document.

Changing Text Fonts. The font modifiers mentioned above work on whatever font you are using. Five possible fonts may be selected (F1, ..., F5). The default font and font characteristics are determined in the printer driver file. Common fonts include Pica (10 characters/inch), Elite (12 characters/inch), and Compressed (17 characters/inch). Some printers also have proportional and letter quality fonts. The variety here will depend on the capabilities of your printer and whether WT comes with a printer driver for your printer. Drivers are supplied for Atari 825, 1025, and 1027, Epson MX-80, FX-80, RX-80, MX-80w/6+, Gemini 10X, Prowriter 8510, NEC 8023, Okidata 82A and 92, and the COMREX CR-II daisy-wheel.

As indicated above, different fonts print a varying number of characters per inch. Since your left margin and your line length are specified in characters, if you change your font, you must also change the margin settings to keep the page looking neat. After some experimenting, I was able to determine the appropriate settings for pica, elite, and compressed and was able to print paragraphs in each font and yet maintain the same left and right margins. You cannot mix fonts on the same line, although you can have normal and double-wide characters in any given font on the same line. If you are going to mix double-wide within normal text, the right edge may or may not come out even. In this format you might better switch to a ragged right edge and the slight discrepancies caused by mixing in double-wide text won't be noticed.

Double-Column Printing. I experimented with the double column option in Writer's Tool and, if you restrict yourself to a single font, it works perfectly fine. To switch fonts, you have to specify a new left margin and line length. If you do this when the text would normally print in the second column, it is printed instead in the first column thus ruining the page. Both columns are not printed in the same pass. First, any header is printed (across both columns). Next the left column is printed. Then the program stops and waits for you to roll the page back until the print head is at the top of the page again. Then the right column is printed followed by an applicable footers (again across both columns). The process worked but it certainly wasn't as convenient as it would be if both columns were formatted in memory and printed down the page in a single pass.

External Programs. If you recall the main menu, an option called Xternal was offered. The external programs can all be accessed from within the Writer's Tool. These programs include a spelling checker, a dictionary maintenance program (to help maintain your own customized dictionaries), a customizer program (to set default format parameters and screen colors), and a printer program (to modify or create your own specialized printer data files). You choose the program you want, it loads and runs and

when it is done, the Writer's Tool loads back in and you are once more in the word processing environment.

Other Features. Space doesn't permit me to touch on all the features available in The Writer's Tool (it takes four pages in the tutorial just to list all the features). Some that I haven't mentioned are listed below:

Print format options include font, page length, footer start, left margin, line length, indent, up to 8 tab positions, line spacing (four options), justification, word wrap on/off, header and footer blocks with imbedded page numbers, text centering, vertical grouping, page eject, space between double columns, and reset to default values.

Soft hyphens can be inserted to produce automatic hyphenation. **Hard spaces** are also supported.

CAPS-LOCK, **INVERSE VIDEO**, and **CURSOR EXCHANGE** key states are displayed when active.

Word count, **character count**, and **memory usage** displays are available.

An **unlimited number of files** can be printed as one document. Disk files can be linked internally or externally and/or merged with text in the memory buffer or with keyboard input.

Printer graphic images, single or multi-line, can be mixed with text during linked printing.

Template documents can be selectively merged with data base items or keyboard entries during printout.

Data base files can be created with the help of prompting derived from labels in a template document.

The **spelling checker** is accessible from the word-processing environment, and returns to that environment when checking and correction is completed.

A **master dictionary** of 20,000 words is provided; any number of user dictionaries can also be created.

Conclusion. The Writer's Tool advertises itself as "A Professional Word Processing Program" and there is, indeed, some credibility to this claim. The editor is quite excellent (except for the lack of a global search & replace), the interaction with Atari DOS is natural and easily mastered, the distinction between fonts and font-modifiers is a good one and works well, the ability to print long documents and to merge printouts with database files is obviously useful, and the availability of a spelling checker will be a welcome tool for many writers.

However, to be a truly top-notch writer's tool, the print preview function will have to be changed substantially. Users want to preview the whole page using a cursor to move up, down, left or right to see what the final product will look like. We also need to be able to start and stop printing at specific pages. And, finally, the global parameters of a document such as page size and left and right margins should only be set once. If a font is changed, let the program figure out how to format the new font to stay within the global settings.

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Enhancements to Basic: A Super Aid at a Super Price Reviewed by Marion D. Kitchens

How many times have you written a good Atari BASIC program only to have it do unexpected and unexplainable things? Ever wish Atari BASIC had automatic line numbering, and instant renumbering? How about DOS functions directly from BASIC? **ENHANCEMENTS TO BASIC** offers this and much more. It allows you to trace thru a program as it is running and see what is happening while it is happening. It will even trace the program on your printer while displaying the normal program output to the screen. Want to find all the lines containing a particular variable? Just type `SVAR 'var'` (put the actual variable name in place of 'var', of course). If you type `DUMP` first, the output will appear on your printer instead of the screen. Typing `SCREEN` will put everything back to your screen as you might guess. **ENHANCEMENTS TO BASIC** provides some forty additional commands to aid in programming. It comes with a copyable (but copyrighted) disk and a 30-page instruction manual.

The instruction manual provides keystroke-by-keystroke instructions for creating a bootable disk with your particular DOS. DOS 2.0s, DOS 2.5, DOS 3.0, OSS DOS XL, SPARTADOS, and others are supported and it works with the 400/800 and XL and XE Ataris. When your disk is booted you can choose between three variations of **ENHANCED BASIC**: full enhancement with trace, full enhancement without trace, and half enhancement. The manual is very well written with clear instructions and examples, so you really have to work at it to foul up. The manual describes the limitations and precautions you should observe in using **ENHANCEMENTS TO BASIC**. It even shows how to get into that troublesome editing lockup problem, which **ENHANCEMENTS TO BASIC** fixes, of course. The manual is chock full of interesting tid bits of information.

It is not practical to describe all of the new commands available in this short space. Some of the more interesting ones are auto line **NUMBERing**, **RENUMBERing**, and **DELETing** a block of lines. You can turn the trace on (`TRON`) and off (`TROFF`) and have it list the entire line (`LLINE`) or list only the line numbers (`LNUMB`) of the trace. A list of a disk directory is displayed by typing `DIR`. You can `LOCK`, `UNLOCK`, `RENAME` and `ERASE` disk files, and in some circumstances `RESTORE` deleted disk files. If you `PROTECT` your program, it can only be `RUN`; it cannot be `LISTED` or edited. You can list all the variables (`LVAR`) in your program, search for lines containing a specified variable (`SVAR 'var'`), and change the name of variables (`CVAR "old,new"`). The keyboard can be locked (`LKB`) to prevent little fingers from playing with your programming while you are away from the computer, and unlocked by your own secret three-character code. Those of you who like to work in `HEX` will be delighted with the `HEX` and `DECimal` commands. The keys 4,5,6,7,8,9,0 when used in conjunction with `CONTROL` and `CONTROL-SHIFT` keys are used to print predefined strings to the screen. For example, pressing `CONTROL+4` prints `LOAD "D: .` Fourteen of the most frequently used strings are predefined, but 7 of them can be redefined to anything you want up to 30 characters long. Typing `HELP` provides a two-page abbreviated description of all the new commands. The above covers

most of the new commands that I think would be of principal interest to Atari BASIC programmers. Others are described in the manual.

With the good, unfortunately, comes some bad. First and most obvious, **ENHANCEMENTS TO BASIC** requires part of your computers memory. My **ENHANCEMENTS TO BASIC** in the full enhanced mode, including DOS XL, required 5760 more bytes than the 800XL's built-in BASIC and DOSXL 2.20. In the half-enhanced mode, the additional memory required was only 1,574 bytes. (First Byte quotes 8K and 4K for these values.) This has been no problem for me so far. Second, if you go to DOS and need to return to **ENHANCED BASIC**, you will, in many cases, wipe out your BASIC program. So if you need DOS functions that are not available from **ENHANCED BASIC**, you must save your program before going to DOS. Disk directory and file lock, unlock, and erase are available from **ENHANCED BASIC**. And so is disk formatting (single and double density) unless you are using DOS XL. There are probably other disadvantages I have not discovered yet, but the advantages far outweigh any found so far.

Some recommendations. If you are using OSS DOS XL 2.2, you should initialize your disk by typing `Q` from the DOS menu, and then type `INIT` at the `D:` prompt. Following the **ENHANCED BASIC** instructions for initializing from the DOS menu will result in the bug described by Joe Waters on page 14 of the May 1985 issue of **CURRENT NOTES**. If you make your bootable disk on the 800XL, you will find that you now have Atari BASIC version C instead of the built in version B. See Bill Wilkinson's article on page 75 of the May 1985 issue of **COMPUTE!** for more information on BASIC versions A, B, and C. I found it convenient to add `COPY.COM`, `INIT.COM`, and `MENU.COM` to the **ENHANCED BASIC** disk so they are readily available when needed. Remember that **ENHANCED BASIC** is a programming aid and is not intended to be used when running programs.

And now for the best part of all. **ENHANCEMENTS TO BASIC** is available for \$14.95 postage paid!!!! I challenge anyone to find this much and powerful software for such a price. I mailed my order with a personal check and received **ENHANCEMENTS TO BASIC** in only 18 days, which I consider to be excellent. The address is: **FIRST BYTE**, P.O. BOX 32, Rices Landing, PA 15357

ENHANCED BASIC by First Byte offers the most 'bang for the buck' that I have seen. Hope others will enjoy it's features as much as I do.

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T Y P E S E T T E R

Reviewed by John Barnes

TYPESETTER is the latest in the line of special graphics software marketed by XLENT Software. The user creates page layouts by editing text and graphic images on a large area of screen memory. The screen memory can be altered pixel by pixel and the edited result can be saved to a disc file or dumped onto a printer page. Two versions are supplied, TYPESETTER 65, which runs on an 800 or an 800XL, and TYPESETTER 130 which runs on a 130XE. All references in the rest of this review will be to TYPESETTER 65. I do, however congratulate XLENT for being one of the first to introduce a product that uses the 130XE's real capabilities.

SOME PAST HISTORY

A little history lesson is in order for the benefit of some of my friends are having trouble distinguishing among the various XLENT products. The first XLENT product in this vein was MEGAFONT (now at revision II+). This program provides tools for manipulating special character sets and using them to dump text files out to a graphics printer in a bit graphics mode. There is also provision for dumping graphics screens from a variety of sources.

PAGE DESIGNER extends these capabilities by allowing the user to bring two stored graphics 8 images into the computer and to modify them by adding more graphics or superimposed text in an infinite variety of fonts. The result can be saved or dumped to a compatible printer. My review of this program in the June 85 CURRENT NOTES was enthusiastic because I feel that PAGE DESIGNER extends the user's creativity in ways that PRINT SHOP (which was this spring's rave program from Broderbund Software) cannot do.

TYPESETTER is a quantum leap beyond PAGE DESIGNER in capabilities. It is also a leap forward in complexity, but that part of the discussion can wait.

ENHANCED CAPABILITIES

Figure 1, which was prepared using TYPESETTER, illustrates the structure of the package. The Text Editor is the guts of the package in that it manages most of the traffic between the user and the main screen. The user never sees the whole of the main screen except by printing it out. All operations are carried in a 160 x 80 window that scrolls smoothly around the 704 x 624 pixel main screen. What you see is much less than what you get.

The user puts graphic images and text on the work area to his heart's content. Graphic images can be loaded from a variety of sources that are capable of generating 62 sector image files on a DOS 2 disk. The Sketch Pad option (to be discussed later) provides additional flexibility in loading graphics onto the main screen. The user can position the screen to an accuracy of one scan line horizontally or vertically. Portions that scroll off the ends or the sides simply wrap around.

The text is loaded, as in Page Designer, from altered character sets stored on disk. The user can, however choose the height and width of the characters that are placed on the screen. The text can overlay a graphic image or it can replace the graphic part of the image, leaving spaces around the letters. In addition to the characters in the loaded font the user can use the built-in graphics characters of the Atari and there is another resident character set that defines a set of patterns. The latter are used for borders or fill areas. Inverse characters, selected using the Atari logo key, provide an additional dimension. Figure 1 was created entirely within the Text Editor using the standard Atari text and graphic characters.

The drawing tool in the Text Editor is the text cursor. Its movement is controlled by the usual cursor keys and a couple of others that provide fine scrolling. The user can rotate characters in 90 deg steps when placing them on the screen and the direction of movement of the text cursor during typing can be selected. The best way to explore all of these capabilities is to experiment. It is, however, a shame that the documentation does not contain more examples like the ones that sufficed for documentation with an early beta test version of the program.

The Sketch Pad option allows the user to manipulate each pixel in a 160 x 80 area that is independent of the main screen. This window can be loaded from a portion of the main screen or from a separate file on disc. The designers refer to the contents of the Sketch Pad as "icons" because they are small images that can be replicated onto the main screen at any position. When performing this "stamping" operation the user can either overlay or replace the selected portion of the main screen. The drawing tool in the Sketch Pad is a graphics cursor that is controlled by a joystick and the keyboard cursor keys. The graphics cursor is also used to make menu selections. Certain keystrokes are used to modify some of the menu selections. A Koala Pad can be used in the 130 version.

Pixel by pixel modification of the image in the Sketch Pad obviously allows one to take a lot of the rough edges off of the type fonts.

This list of capabilities is by no means exhaustive, and it should be obvious that the program can be used to create lots of different outputs. Advertising layouts, viewgraphs, slides, greeting cards, banners, and others come immediately to mind. This program is getting close to being useful for computer aided drafting. I am impressed by its power.

RUNNING THE PROGRAM

TYPESETTER boots from an AUTORUN.SYS file on a DOS 2 disc. It is easy (I find it essential) to use extra disk drives for loading and storing files. There is a built-in



formatting option to open up a new disk if the old one is full. Each stored image takes up 220 sectors, so disks fill up quickly. The ESC key takes the user back to the main menu and it is also used to bail out of some other functions that the user may not wish to finish. The program is overlaid, so that there is a good deal of disk swapping for those who work with a single drive.

I have made up a couple of visual aids to assist myself in designing TYPESETTER layouts. Graph paper with 1/4 inch squares is another necessary adjunct. Do quite a complete design before going into TYPESETTER because you will be working piecemeal once you are in the program. XLENT advocates using Page Designer to help with this function, but I find that it is too limited for the things I have done.

The length of time required to print an image is not too bad because TYPESETTER uses the full width of the Epson print head.

COMPLEXITY, THE PRICE OF POWER

The designers of TYPESETTER have done an outstanding job of loading the program up with functionality. I am told that the code is incredibly constrained by the amount of available memory. Every key on the keyboard has about 16 different meanings depending on whether it is part of a control sequence, a graphics character, inverse video character, upper or lower case or a combination thereof. It is easy to lose one's way in such a jungle and the user is warned that alertness is required. Fortunately, it is easy to back out of many difficulties, but I still feel like a medieval monk hunched over an illuminated manuscript when I use the program. In short, the human engineering of this product is not very good.

I think that the designers could have followed the example of Text Wizard or SynCalc in making better use of the function keys to separate the control functions from the text entry functions. In talking with the XLENT people I gather that the program is still undergoing some evolution even as it is being marketed. I understand that today's software designers must grab the brass ring while

they can, but I also think they should critique their work more carefully and avoid selling a wine before its time.

DOCUMENTATION

The documentation for TYPESETTER is clearly more detailed than XLENT's previous work. Thank God. But this complex product demands still more. TYPESETTER is at least as complicated as VisiCalc. A reference card is essential, and more examples are needed. The process of trying everything is too time-consuming. It should be pointed out that, at a suggested retail price of \$34.95, it is no longer cheap (in Atari terms). Auxiliary discs containing icons, graphics, and fonts are available for the interested user, but I hope that our user group libraries will support distribution of some tutorials and other auxiliary material.

QUIRKS and GLITCHES

I encountered a couple of problems that I had to make several attempts at solving. The first of these involved fetching and stamping in the Sketch Pad function. The user must bump the graphic cursor into the image boundary to make a menu selection. After making the selection he must make a keystroke. The keystroke does not take effect until the graphic cursor is backed away from the image boundary. This is not documented and it is not the obvious thing to do, at least as far as I am concerned.

I never was able to control the fill mode in the Sketch Pad. I also found that both the beginning and the end of each line segment must be flagged in the draw function. It is much better to stick with Micro Illustrator to do complex drawing, but it is a nuisance to boot up another program and then go through the conversion steps.

My printer displaced some of the lines slightly in one of the print modes, ruining my lovely artwork and forcing me to use another print mode that I did not particularly want.

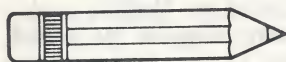
The control keys in the Text Editor are not recognized when the keyboard is in lower case or inverse video, or both. This requires the user to back up, repair any damage, and reset the keyboard before trying to set a new flag. This is annoying.

I am certain that the XLENT people will try to respond to these bugs and I apologize to them for not working out good explanations of the problem sooner.

CONCLUSION

TYPESETTER is a powerful tool for graphics on the 8-bit Atari machines. It would appear to push the graphics abilities of these machines into regions where only much more expensive hardware and software dares to tread. Patience and perseverance in the use of this tool will provide many pleasing and useful art objects, particularly for someone like me, who makes a Rohrschach test every time he takes a drafting pen in hand.

I understand that XLENT will soon have additional software for working with Sketch Pad images and that there will be 16 x 16 pixel type fonts. I look forward to these extensions and to many more hours of using TYPESETTER.



Software Licensing (continued from page 39)

after the sale was completed. If you purchase software off-the-shelf and were not informed about, did not reasonably expect, and did not agree to the terms of the license agreement in the box, then those terms are not part of the agreement and you are not bound by those terms.

In other words, if a store sells you a package of software, the sale is complete, and the terms of the sale cannot be modified by a piece of paper you discover later when you open the package. In particular, the paper cannot convert a completed "sale" into a "licensing agreement."

Courts also tend to look with disfavor upon "take it or leave it" contracts. Contract law is based on the idea that there is an agreement. A lengthy "agreement" found inside that new software box you bought obviously contains a great number of terms that were never agreed to. The seller is simply trying to impose them unilaterally on a "take it or leave it" basis.

Moreover, where many of the terms are onesided, the court is likely to view the document as imposed rather than agreed to, and the court may even throw out the entire document even though some of the terms might be reasonable in themselves. I would expect a court to be very skeptical of license agreements for software where the seller does not promise to do anything, and in fact disclaims virtually everything.

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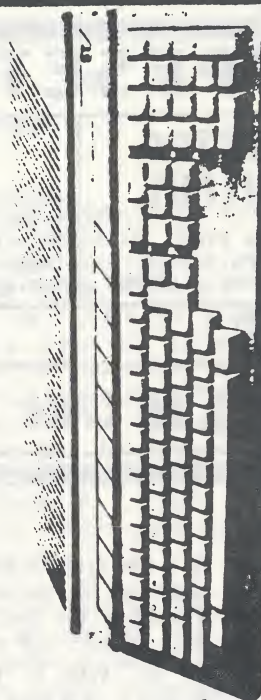
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Software Licensing Agreements

by Robert A. Kreiss

(Mr. Kreiss is an attorney with the Seattle law firm of Cary and Baron. The following article originally appeared in *NORTHWEST COMPUTING*, a publication of the Northwest Computer Society, and appears in *CURRENT NOTES* with Mr. Kreiss' permission.)

Software licensing agreements sometimes seem to me to be a lot like those old-fashioned "melodramas" they had in the 1890's.

Remember those melodramas where the villain, with his long black moustache, swirling cape, and evil leer, appears near the climax of the play and announces that he now owns the Old Homestead. It transpires that he has tricked the beautiful, innocent heroine into deeding the property to him under the guise of having her sign a letter to the editor.

Consider the kinds of licensing agreements which one sometimes (often?) encounters with ordinary off-the-shelf software for use with home computers. It is usually full of legalese in which you (the purchaser) are informed that the seller is disclaiming that the software will do anything, but at the same time the seller is stating that you cannot transfer the copy to anyone else, make copies, or do anything else with your new product.

The purchaser, like the innocent heroine of a melodrama, thinks he is buying something, but later finds out that the licensing agreement specifically disclaims that. In fact, the purchaser may not even see the license agreement until he gets home and finds it when he opens the box.

Of course, in the melodrama, the back-hearted villain is foiled at the end; often hoisted on his own petard. Could it be that a similar ending will also be the fate of software licensors?

Terms of License Agreement

Consider a typical software license agreement that comes with the new CanDo software program you just bought. It probably has a number of provisions:

1. You are granted a license only to use the program, limited to a single computer. You are allowed to make one back-up copy.
2. You are not allowed to make any other copies, and you are not allowed to sell or transfer your copy to anyone else.
3. You may not patch or modify the program in any way.
4. The software is sold "AS IS". No warranties are made the the fabulous, heavily advertised CanDo software you bought will do anything. In fact, it is expressly stated that if it does anything at all (including destroying everything in your computer memory or on other disks), you

assume all of the risks. What it does may or may not be accurate, desirable, or useful. The company disclaims any responsibility.

The only thing missing from the above licensing is the evil laugh which we have come to associate with villains in melodramas. As computers and software become more sophisticated, perhaps we will be treated to the sound of that evil laughter at the time we insert our program disks into our computers.

Fortunately, most of us don't have to test the validity of these software licensing agreements. We buy the program, and lo, it does work. We don't have occasion to patch the program. We don't make copies and transfer them to others. Thus the question of the validity of the agreement doesn't arise.

Indeed, I know of no reported lawsuit which involves the question of whether such agreements are valid. This is somewhat surprising, considering the publicity generated by software companies about the problems of illicit piracy and bootleg copies.

Louisianas's "Software License Enforcement Act"

The anti-piracy program has led the computer industry to lobby for laws which would make these agreements more enforceable. Software developers have persuaded Louisiana to pass such a law. The new law provides for the enforceability of so-called "shrink-wrapped" license agreements under certain conditions.

The conditions included requirements that the purchaser be given notice that there are license terms, and what those terms are; that if a purchaser opens the sealed package containing the software he is bound by the terms; and that the purchaser be told that he can reject the terms by returning the package unopened and that he will be given a full refund.

Void or Enforceable

Software license agreements generally and even the new Louisiana statute may be at least partially void. The absence of cases makes it impossible to predict what a court would do in a particular situation, but there is a reasonable amount of doubt in the legal community about the validity of some of the more common terms found in license agreements.

Contractual agreements between a buyer and a seller may be valid. But the key word here is "agreement." Courts will enforce licenses and contracts if the parties considered and bargained or agreed upon the terms.

On the other hand, courts will not enforce the terms of an "agreement" which one party knew nothing about until
(Continued on page 38)

ST World

by Joe Waters

Current Notes, along with other adventurous souls, was one of the early purchasers of the new Atari ST. Besides using the machine to produce the newsletter (eventually), I thought it would be useful to give our readers a hands-on perspective of the new Atari hardware and software. Thus, welcome to ST world.

The new Atari 520 ST arrived in July, and, except for a few bumps along the way (see the 520ST article by Jack Holtzhauer on page 27) the hardware is every bit as impressive as old Jack promised.

The Monitors. The 640x400 resolution of the monochrome monitor (\$199) is exceptionally clear. The color monitor (\$399) produces a low resolution (320x200) and a medium resolution (640x200) picture. If anyone is familiar with an IBM color monitor, you will be particularly impressed not only with the crispness and clarity of the colors, but also the legibility of the text in the 80-column medium resolution mode. There is only one port on the ST for a monitor. You can plug in either the monochrome or the color -- the computer automatically figures out which one you are using. If you have the monochrome, you cannot use the low or medium color modes. Similarly, if you have a color monitor, you cannot use the high resolution mode. Although early reports claimed that the ST would have an RF modulator included, there is no jack on the back for your TV. However, don't throw away your TV just yet. ANALOG has already hooked up an ST to a TV and says the picture is great. They will be publishing instructions on how you can do this (you won't even have to open up your ST) in an upcoming issue of the magazine.

The Drive(s). The single-sided 500K disk drive (\$199) is quiet and fast (the 280K TOS operating system loads in about 30 seconds). A double-sided 1M drive (\$299) is also available. One thing you may not be aware of, the disk drive uses a standard IBM format. Some enterprising users have already hooked up standard IBM drives to the ST and have been able to read them without any trouble. When the IBM PC II comes out with its 3.5" drives (I know IBM said that this doesn't exist, but you can't believe anything IBM says), your ST disks will be compatible. (Not the programs, of course, just the disks. But if you are just passing data back and forth, that is enough.) By the way, the connector for the drive cable is non-standard and made exclusively for Atari. However, Atari has informed John Baum of STS Video that they will be supplying these connectors to authorized repair centers.

Peripheral Ports. The modem port takes a standard IBM cable as does the printer port. If you are going to buy a cable, however, check with the Atari advertisers in this newsletter before you run out to Computerland or MBI or any standard IBM-type computer store; you'll save a bundle. I've used a modem (Hayes 300) and a printer (Panasonic 1091) without any difficulties whatsoever. If your printer is not Epson compatible, you may not be so fortunate.

The Unbiased? Press. I'd like to say that the hardware has been met by rave reviews. However, since Commodore introduced the Amiga, every computer-type magazine (except the Atari crowd of course) has been falling over itself in lavish praise of the Amiga without any hint that another new, powerful, and exciting computer is available. Why is that? Perhaps we'll have to put one of our investigative reporters on the job to uncover the reasons for this apparent Atari blindness. The Amiga certainly is an impressive machine, after all it is an "advanced Atari" having been designed by the original designer of your 400/800 machines. As a matter of fact, although the Atari suit with Commodore has not yet been settled, the chances are high that Atari will receive a royalty for each Amiga sold!

ST vs Amiga. However, although the AMIGA can do more, it costs more. A color model with 520K and a color monitor will cost approximately twice the cost of the ST (\$2,000 vs \$1,000). If you go monochrome on the ST, which by the way, I prefer to the color, the cost is only \$800. For \$800, I have a machine that is every bit as fast as my \$\$\$\$\$ IBM AT, has a better resolution monitor, and, given appropriate software, will allow me to accomplish a wide variety of professional tasks just as easily and quickly as the IBM PC allows. Why should I spend more money just to get a machine that does this while, at the same time, allows me to view animated color cartoons in stereo? I don't really want to get into the debate as to which is a better machine. I don't care which is better. The ST is more than good enough for all the things I want to do and, most importantly, on a limited budget, it is much more affordable than is the Amiga.

ST Software. Astute readers will have noticed an important phrase in the paragraph above -- "given appropriate software." Without software, even a \$100 ST wouldn't be much of a bargain. So what software is available? The answer to that question is one of the more important reasons for producing this column. Each month I will try to highlight new offerings for the Atari ST line. So, what's available now?

Atari Languages. The ST comes with two languages, LOGO and BASIC. LOGO was delivered with the original machines. Atari is promising BASIC no later than early September. Those of you interested in doing commercial development on the ST can purchase the ST Development system which includes C, an assembler, debugger, and a ton of documentation for \$300. If interested, contact Richard Frick, 1196 Vorregas, Sunnyvale, CA 94086 (408) 745-4926. By the way, if you'd like to buy another drive or monitor, or even the whole ST system, you can contact Atari directly, c/o Mr. Frick, to make your purchase.

4xFORTH. Many other languages are under development by various third parties. Some such as Hippo C may even be out by the time you are reading this. But there is one that is available right now from The Dragon Group, Inc. 4xFORTH is a multiuser, multitasking, real-time system running under Atari's TOS operating system. Based on the FORTH 83 Standard, standard programs will port and run as written (see discussion of EXPRESS below). This implementation of FORTH, which has been designed to give

the user a true 32 bit FORTH system, is incredibly fast. The Dragon Group claims that it can often beat a C compiler by 25% or more.

4xFORTH is supplied in several different configurations. Level I (\$99.95) contains the Multiuser, multitasking 4xFORTH system, a fast high level compiler, full screen editor with special function key support, assembler with mode/register error checking, access to Atari file system, ram disk and serial disk support, user addable disk and terminal drivers, printing support, CHECKING vocabulary for program debugging, on line help support for disk loaded code, and support for Atari graphics. Level II (\$149.95), adds support for GEM calls and a floating point system. A full-fledged developer's system is also available. For more information, see the PD disk section below or contact The Dragon Group, Inc. 148 Poca Fork Road, Elkview, WV 25071 (304) 965-5517.

Express. You say you are not a programmer? You just want to use your ST for word processing? Lucky you. On Monday, August 19, Mirage Concepts started shipping their EXPRESS Letter Processor. This program, written in FORTH, was introduced in April for the IBM PC. Mirage got an ST and ported the program over in two weeks. I hope to have a copy by the time you read this; a full review will come next month. In the mean time, I can tell you that the program has five main components:

Word Processor (word wrap, page and line counter, reformat paragraph, set margin tabs, bold/underline/pause, print envelope, help screen, file commands).

Mailing List (standard format, multiple files, capacity:disk size, auto sort, help screen).

Mail Merge (match any field, sort alpha or zip)

Typewriter (memory typesriter, direct to printer, allow print functions)

Terminal (send files, receive files, echo to print, echo to disk).

And the price for all this? \$49.95. For more information contact Mirage Concepts, 4055 West Shaw Ave., Suite 108, Fresno, CA 93711 (800) 641-1441.

Presenting the Atari ST. Although there may not be much software out for the ST, there is a book available. Presenting the Atari ST, 198 pp. by L. English and J. Walkowiak, is published by Abacus Software, P.O. Box 7211, Grand Rapids, MI 49510 (616) 241-5510. The book just arrived so I can't give you a detailed review yet. You can get some idea of the content by the chapter titles: Introducing the 16-bit Processors, The Architecture of the Atari ST, The Atari ST Operating System, Towards a User-friendly Computer, Working with GEM, Communication Between Man and Machine, and LOGO.

Public Domain ST Software. Besides commercial software, expect to see a wide variety of public domain software becoming available. Since CURRENT NOTES has an ST, I will serve, initially, as the source for ST library

disks. Four disks are available right now; they are listed below. Disks will be available at NOVATARI meetings and will cost \$4.00 per disk. For mail orders, add an additional \$0.50 plus \$0.25 per disk ordered. Order from CURRENT NOTES, 122 N. Johnson Road, Sterling, VA 22170.

ST-1: High Resolution Demos. Show off the resolution of your monochrome monitor with the near photo-quality of this black and white slide show.

ST-2: Color Slide Show. Seen the great color pictures published in the press? Here they are. Weather map, faucet, waterfall, trumpet, and more.

ST-3: 4xFORTH Demo Disk. Want to try out 4xFORTH and see what it is like? This demo disk from The Dragon Group allows you to do and use all of the functions of 4xFORTH except the accessing of the Atari file system and the saving of ram disk to a physical disk drive (blocks you build containing programs will be lost when you exit to TOS). Includes nearly 20 pages of documentation files.

ST-4: STERM. This program is a 20k source code (68000 assembler) of a ST terminal program for the public domain. It has ASCII upload and downloading but has no Xmodem (...yet!). Readers of the ST section in the AtariS16 on CompuServe will recognize this as the terminal program developed by Jez San of Argonaut Software in England. Hopefully, Jez will provide another copy when he adds Xmodem.



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The first line of your mailing label has some important information for you. The most important is the expiration date of your CURRENT NOTES subscription or club membership. It is in the form YYMM. If your label says 8512, that means the last issue of CURRENT NOTES you will receive is in December, 1985. If your label says 8509 or 8510, therefore, it is time for you to RENEW!

You will also notice a two-letter club abbreviation followed by a three-digit club ID number (for internal CN use) followed by a single letter "R" or "N". CURRENT NOTES is classified as a "Requestor's" publication. If you are receiving CURRENT NOTES via your club, I must have on file a signed, and dated, statement saying that you do, indeed, request this newsletter. The letter "R" indicates that I have such a statement from you. The letter "N" indicates that I do not. If you see the letter "N", please fill out the form on page 46 (a xerox copy is sufficient) and send it to me (or give it to an appropriate club representative to forward to me). The statements are good for three years, so you don't have to do this very often. If you are subscribing directly, the checks you sent in are sufficient evidence that you have "requested" the newsletter.

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AURA

Minutes: 1 August 1985

by Bill Pimble

Reports of Officers: Vice-president John Barnes reported that the executive committee would be deciding whether to participate in the October 12th Computerfest '85. He also announced that disks 37-42 are now available in the AURA library at ACA in Gaithersburg. AURA members can borrow disks using their membership cards. Bill Pimble reported that AURA membership currently stands at 128.

Demonstrations: The club received several demonstrations. Subjects were as diverse as "how to lubricate the 1050 disk drive" to "Bounty Bob Strike's Back" (the sequel to "Miner 2049er"). The highlight of the evening, however, was a demonstration of the new 520ST by Mike Barnes and the crew from Xlent Software. Demonstrations of color and high resolution monochrome graphics were impressive. Mike also reported on some new software packages that are in the works at Xlent.

Bill Schadt, the club librarian, demonstrated several graphics programs from club disk #47 including his original "Pixel Scan" and a high-speed graphics utility program. Club disks up to #49 were available at the meeting.

WACUG

President's Report

by Jack Holtzhauer

WACUG's September meeting will be held at 7:00 pm on the evening of Tuesday the 24th. Bob Danson of the National Capitol and Capital Pro Micro UGs will demonstrate his ATR8000 system and we'll show off some new software goodies. We also hope to have a preliminary report from our nominating committee and Cecil Alton will chair a section of the meeting during which the group's officers will attempt to describe what they're doing and how they're doing it. Maybe by putting on this "show and tell" we might be able to entice some of you to run for office in our November elections.

NOVATARI

Novatari Meetings

by Dave Meyer

The July meeting of Novatari featured Mike Barnes of "XLENT SOFTWARE" discussing printer utilities including demonstrations of Megafont II and Typesetter. The 520ST also made its debut at the July meeting and "wowwed" us with its graphics capabilities.

The August meeting had a new format, with six individual timeslots for the various parts of the program. This meeting format will be tried for the next few months. We hope it will enable all of the members attend the sections of the meeting that appeal to them, while still allowing for ample time to purchase library disks, Novatari Program Exchange disks, etc.

During the August meeting we reviewed "Final Legacy" (a submarine game), "Track and Field" (with Olympic type events), Deep Blue C (the language "C"), and the 520ST.

Here is the new meeting format. If you would like to demonstrate any software, new or old, just contact Dennis McCormick (430-9552) or myself (455-7145) and we'll make the arrangements.

NOVATARI MEETING FORMAT

5:30 Beginners Forum
6:00 Games/Entertainment Demos'
6:30 Library/NPX Demos'
7:00 Open Forum
7:30 Home/Business Productivity Demos'
8:00 Business Meeting

President's Report

by Joe Waters

Volunteers. Those of you who attended the August meeting also noticed that the library and blank disk tables were moved out into the hallway. This helped greatly to cut down on noise during the program. However, it doesn't make for a great evening if a few people have to spend all their time during the meeting sitting in the hallway! We would like individual members to volunteer to take a short time slot (half an hour or even only 15 minutes) to help man the tables. Georgia Weatherhead (938-4829) will be coordinating this effort. Please give her a call if you can volunteer some of your time.

Library Disks. Our valued librarian, Evan Brooks, now copies from 200-300 disks a month, far too many to allow him any time to put together new library disks. He needs some help. We have a wide variety of "raw" disks available. We need volunteers to help select desirable programs to be included in our library. All you have to do is try out the various programs, pick the best ones, make sure they work, and prepare at least some minimal documentation if required. If you feel you can help out in this area, give Evan (354-4482) a call.

New Additions to the Library. I don't have room to highlight all the new disks we have added to our library, but let me just mention two of particular interest: the RDBMS/AT Database Manager and AMODEM 7.1.

The database manager called RDBMS/AT (Utility Disk No. 4) was written by Allen Leigh of Pepperell, MA. This series of BASIC programs gives you the tools you need to help you build your own database application in BASIC. It provides the following functions: (1) A standalone builder program written in Atari BASIC to build the database. You can have as many fields in each record as you want, and the

length of each field can be as long as you want. The fields can be either REAL or CHARACTER values. You can have as many records in each relation as you want, and you can also have as many separate relations as you want, limited only by the memory available. (2) Six subroutines that can be included in the source of application programs. These routines provide a "user view" of the database. (3) Various routines to support the linked lists that comprise the database and perform the disk I/O. These routines provide a "physical view" of the database. The source code contains many comments to help you understand the code. The comments do not have BASIC line numbers and are thus thrown away when the code is loaded into memory. A 20+ page manual is included on the disk.

AMODEM 7.1 (Telecom Disk No. 4) is a terminal program, written by Trent Dudley, for all 8-bit Atari computers with at least 48K RAM. It works with most popular modems. When you run AMODEM 7.1, it automatically determines the modem/handler combination you are using and configures itself accordingly. Besides all the standard AMODEM functions, AMODEM 7.1 can utilize joystick input, includes a clock to help you keep track of your time online, can toggle smooth verticle scrolling on/off, and has macros to allow you to set up automatic log-on files. This is one of the most sophisticated versions of AMODEM available and it works on whatever modem you have. Complete documentation is included.

Remember, Evan has a folder with complete library disk descriptions available at each NOVATARI meeting. If you are unsure of what is on a disk, just check the folder.

Latest NPX Releases

by J. O. Stevenson

We have had several new NPX releases and it is time to summarize what they are.

NPX #4 WEEKLY SCHEDULER (\$5) Jon Smith. This program allows the user to schedule his or her time for a given week. It is used most effectively to schedule activities that are done every week at the same time. Functions included are: Create schedule, Load schedule, Save schedule, Edit schedule, Print schedule, and Delete schedule.

NPX #5 MATH GAME (\$5) Lawrence James. This is a simple arcade game to teach simple arithmetic (addition and subtraction) at the first or second grade level. Of interest to non-elementary school age Atarians is the included assembly language source code that illustrates player-missile graphics and smooth scrolling.

(The next four NPX releases, besides being valuable programs in their own right, are significant tools for interacting with minis and main-frames.)

NPX #6 PRINT TOOL (\$20) Marshall Abrams. This is a powerful utility descended from, and compatible with, the RUNOFF/NROFF printer formatting programs found on DEC minis and in UNIX operating systems. Using a word processing program to enter text and the appropriate codes, Print Tool performs the following functions:

automatic section, chapter, appendix, and page numbering; output to a printer, file, or screen; proportional printing and right justification; table of contents, footnotes, and index; running headers and footers; mixed size type on one line; programmable printer drivers; and more. Since the text has no imbedded control codes, it can be easily sent to a mini. Hard copies of the ample manual can only be obtained at the Novatari Meetings.

NPX #7 DEEP BLUE C COMPILER (\$8) John Howard Palevich. An excellent opportunity for Atarians to learn one of the growing major languages on minis and mainframes (and on the 520ST!). This is a subset of Version 7 C and is based on Ron Cain's Small-C compiler. It supports: char, int, and pointer data types; if, else, while, break, continue, return, for, do, switch, case, and default control statements; #define and #include compiler directives; relocating linker; Atari graphics and player/missile functions. It does not support structures, unions, and floating point numbers. The relocating linker is the first such that I know of for the Atari for any language. OSS C/65 does not support separately compiled routines. It does compile into 6502 assembly code, however, whereas Deep Blue C compiles into an intermediate code which is interpreted.

NPX #8 DEEP BLUE SECRETS (\$8) John Howard Palevich. This is the C source code for the compiler and linker, and the Atar Macro Assembler source for the interpreter. This offers the chance to learn something about how compilers and linkers are put together. With the compiler source it might also be possible to upgrade the arithmetic functions to handle floating point.

NPX #9 CHAMELEON TERMINAL EMULATOR (\$8) John Howard Palevich. This program allows the Atari to act as a remote terminal to another computer. The possible terminals are: "glass TTY", Lear Siegler's ADM-3A, DEC VT-52 (older from of VT-100), VT-52XL (non-standard extension), IBM 3031 ASCII terminal, and a test terminal. A screen size of 24 lines by 40, 80, or 132 columns is supported by using the Atari smooth scrolling. 75 to 1200 baud continuous communication or 1800 to 9600 baud non-continuous communication is possible. More important than the terminal emulator is the capability of uploading and downloading previously generated files. Flow-controlled, XModem, and Kermit protocols are supported.

(Finally a really captivating game, even for the old arcade hands.)

NPX #10 DANDY (\$8) John Howard Palevich. This is basically an action maze adventure, somewhat similar to the Temple of Apshai and Ultima series. But Dandy allows multiple (1-4) players to compete at the same time! Moreover, you can create your own dungeon mazes.

More programs are in the works. Even on the small scale that we are operating, compared to major commercial ventures, it still takes more effort than people realize at first to produce simple, user-friendly programs that others might enjoy. Nevertheless, dust off your pride and joys, polish them a bit more, and get them into NPX!

NOVATARI DISK LIBRARY

Order disks from the NOVATARI librarian. Price for WAACE members (i.e. anyone who subscribes to Current Notes) is \$3.00/disk plus \$1.00 for postage and handling for every 3 disks. If you are not a member of WAACE, cost is a flat \$5/disk (includes postage and handling.) Send checks, payable to NOVATARI, to M. Evan Brooks, 4008 Patricia Street, Annandale, VA 22003.

GAME DISKS:

- 1-TEXT ADVENTURES (Crash Dive!, Adventure in the 5th Dimension, Kidnapped!, Operation Sabotage)
- 2-GAMBLING GAMES (Blackjack, Five Card Stud, Gambler's Dozen, Progressive Jackpot, Poker Squares)
- 3-SIMULATIONS (Broadway, Civil War, Dairy Farming, Dark Horse, Kingdom)
- 4-MAZE GAMES (Dragon Maze, Hidden Maze, Caves of Ice, The Halls of the Leprechaun King, Maze Maniac, Master Maze, Maze Race, 3-D Maze, OMAZE)
- 5-PARLOR GAMES (Othello, Battleship, Monopoly, Mille Bornes, Yhatzee, Simon, Solitaire)
- 6-GRAPHICS GAMES (Engineer, Night Flyer, Oil Piazza Hotel, Retrofire, Titan)
- 7-ACTION! GAMES (Rats Revenge, Warp Attack, Birds, Angle Worms, Gems, Snails, Pong, Break Out, Bounce Fun)
- 8-ARCADE LOOK-A-LIKES (Pac Attack, Livewire, Maniac, Burgers, and more ...)

MUSIC DISKS:

- 1-TV/MOVIES (AMS I: Cheers, The Entertainer, ENOK Celebration, Knight Rider, Raiders of the Lost Ark, ...)
- 2-ROCK (AMS I: Beat-It, Eye of the Tiger, Thriller, Still Rock'n Roll to Me, I Feel the Earth Move, Spinning Wheel)
- 3-JAZZ (AMS II: In the Mood, Satin Doll, Take 5, Muskrat Rag, Soda Rag, City Lights, Atrain, Southern Nights, Ghost Busers, We Are the World)
- 4-BASIC MUSIC Programs (Star Spangled Banner, Flight of the Bumble Bee, The Entertainer, Darktown Strutter's Ball, Handel's Messiah, Mr. Sandman, Bibbidi Bobbidi Boo)

EDUCATION DISKS:

- 1-MATHEMATICS (Drill, Function, Line, Math Kids, Math Fractions, Math Quiz, Math Time, Multiply)
- 2-(More educational disks coming in October)

TELECOM DISKS:

- 1-850 Interface (Amodem Plus V4.4, Amodem Plus XL V2.5, Autodial, TSCOPE, plus several documentation files...)
- 2-835/1030 Modems (Amodem - 3 versions, TSCOPE, DISKLINK, handlers and docs for all programs)
- 3-MPP Modems (Amodem Plus V1.6, AmodemXL, MPP File converters, R-Handler, MSCOPE, and documentation)
- 4-AMODEM 7.1 (Works with all popular modems, many bells and whistle, complete documentation included.)

UTILITY DISKS:

- 1-MISC UTILITIES (Casette to Disk, Sector Examiner, Make AUTORUN.SYS, Timeclock, and more....)
- 2-PRINTER UTILITIES (Banner Generator, Cross-Reference Lister, Disk Directory Printer, ATASCII Lister Program, Mailing List Program, Screen Dump, and more...)
- 3-ATARI DOS 2.5 (DOS.SYS, DUP.SYS, RAMDISK.COM, COPY32.COM, DISKFIX.COM, SETUP.COM, DOS25.DOC)

4-RELATIONAL DATA BASE MANAGEMENT SYSTEM (by Allen Leigh) Provides the BASIC routines you need to build your own database application program.

5-GRAPHICS TRILOGY (by Tim Kilby) AMUCE: a character editor that aids you in designing text fonts; BIP: easy to use graphic drawing program; and MMPC: helps you build your own display-list modifications.

6-COPYMATE 130 (Sector copying program for the 130XE. Copies entire disk in one pass. Makes multiple copies without rereading original.)

7-SECTOR COPIER (Sector copying program for 400/800/800XL series.)

8-TRANSLATOR DISK (Loads old Atari operating system into XL and XE computers so that they can run all available Atari software).

LANGUAGE DISKS:

1-fig-FORTH Version 1.1 (Includes FORTH language, Assembler, Debugger, Editor, and complete doc files)

2-ACTION! Source Programs (Rats Revenge, Warp Attack, Angle Worms, Gems, Snails, Pong)

3-ACTION! GRAPHICS DEMOS (See how Action! can show off the graphics capabilities of your Atari.)

4-ACTION! UTILITY PROGRAMS (Mostly programming aids to help you in your Action! programming)

5-ACTION! MODULES #1 (Assortment of approximately 30 general purpose modules that you can include in your programs. Documentation included.)

6-ACTION! MODULES #2 (Similar to Modules #1 but includes more advanced procedures like an Action! disassembler. Documentation included.)

7-BASIC XL REF-BASE (by Christopher F. Chabris) A miniature database manager built with BASIC XL. Shows how to use many of the special features of BASIC XL.)

8-LOGO DEMOS #1(Coming)

Coming: A series of disks containing "The Best of CompuServe."

NOVATARI PROGRAM EXCHANGE

1-VIZPICS (\$3) Collection of pictures (S1: Dark Crystals, S2: Star Trek) generated by Visualizer.

2-WORD BUILDER (\$7) Vocabulary-building game and dictionary maintenance program with nine 100-word dictionaries (including grades 2-8).

3-UNDELETER (\$3) A menu-driven utility that allows you to recover accidentally deleted disk files.

4-WEEKLY SCHEDULER (\$5) Allows the user to schedule his/her time for a given week.

5-MATH GAME (\$5) Simple arcade game teaches simple arithmetic (addition/subtraction) at 1st or 2nd grade level.

6-PRINT TOOL (\$20) Powerful utility descended from, and compatible with, RUNOFF/NROFF printer formatting programs.

7-DEEP BLUE C COMPILER (\$8) A subset of Version 7 C based on Ron Cain's Small-C compiler.

8-DEEP BLUE SECRETS (\$8) The C source code for the compiler and linker and the Atari Macro Assembler source for the interpreter of Deep Blue C.

9-CHAMELEON TERMINAL EMULATOR (\$8) Allows Atari to act as a remote terminal to another computer.

10-DANDY (\$8) An action maze adventure somewhat similar to Temple of Apshai and Ultima series.

Washington Area Atari Computer Enthusiasts

Northern Virginia Atari Users Group

President..... Joe Waters..... (703) 430-1215
 Vice President..... Jim Stevenson..... (703) 378-4093
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 Education..... Diana Burdt..... (703) 425-5073
 Disk Librarian..... M. Evan Brooks..... (703) 354-4482
 BBS..... ARNUDIC..... (703) 569-8305

Meetings: 2nd Sunday of each month, 5:30-8:30, in the large Auditorium at WASHINGTON GAS LIGHT, 6801 Industrial Road, Springfield, VA. From Northwest: take beltway (495) to east on Braddock (620) to south on Backlick (617). From Northeast: Shirley Highway (395) to West on Edsall Road (648) to south on Backlick. Take a left at the light by Industrial Road. Washington Gas Light is the second building on the right. Meeting is organized in half-hour segments: 5:30 (Beginner's Forum), 6:00 (Demos of Entertainment Software), 6:30 (Demos of New Library and NPX Disks), 7:00 (Open Forum: News and Announcements), 7:30 (Demos of Home Productivity Software), 8:00 (Business Meeting). While the above programs are going on in the large auditorium, the small auditorium is used for meetings of the Basic XL SIG (5:30-6:15), the Telecom SIG (6:15-7:00) and a Kid's SIG (all other times).

New Members: Dues are \$15 (includes subscription to Current Notes). Send checks, payable to NOVATARI, to Curtis Sandler, 7213 Idylwood Court, Falls Church, VA 22043.

Atari Users' Regional Association

President..... Marshall Abrams..... (301) 588-1005
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 Correspondence Sec.. Bruce McLendon..... (301) 587-7890
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 Disk Librarian..... William Schadt..... (301) 622-1547
 Hardware Coordinator Moe Sherman..... (301) 593-1076

Meetings: 1st Thursday of every month, 7:00 pm, Wheaton Library, 11701 Georgia Avenue, Wheaton, Maryland.

New Members: Dues are \$15/year (includes subscription to Current Notes). Mail check, payable to AURA, to Treasurer, AURA, P.O. Box 7761, Silver Spring, MD 20907.

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President..... Mike Kerwin..... (301) 845-4477
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 System Operator..... Sam Yu..... (301) 662-5586
 BBS..... (301) 694-8983

Meetings: 3rd Tuesday of every month, 7:00 - 9:30 pm in the Parish Hall behind St. Paul's Luthern Church located at 14 W. Pennsylvania Avenue in Walkersville, Maryland.

New Members: Dues are \$20/family (includes subscription to Current Notes). Send checks, payable to F.A.C.E., to Buddy Smallwood, P.O. Box 300, Keedysville, MD 21756.



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Washington Area Atari Computer Enthusiasts

Capital Pro Micro-Users Group

President..... Bob Kelly..... (301) 839-7377
 VP-Finances..... Reg Brown..... (301) 340-7943
 VP-Communications... Bob Danson..... (703) 780-0758
 VP-Program Affairs.. Frank Jones..... (301) 593-1056
 Disk Library..... Mike Abramowitz..... (301) 983-2363
 Sysop/RBBS..... Frank Huband..... (703) 276-8342

Meetings: Capital Pro Micro-Users meetings are held at the Public Library in Oxon Hill, Maryland. The Library is located near the Woodrow Wilson Bridge just off the Washington beltway. From Virginia via the Woodrow Wilson Bridge, stay on the beltway to Maryland exit #4 West (St. Barnabas Road). St. Barnabas Road merges with Oxon Hill Rd. (right turn at end of exit ramp); proceed 1/4 mile; Library is on your left. The meetings are held each month in the Author Room. The Library telephone number is 301-839-2400.

New Members: Dues are \$15/year (includes subscription to Current Notes) or \$3/year (no subscription). Send check, payable to Reg Brown, to Reg Brown, 9325 Bent Ridge, Potomac, Maryland 20854.



National Capital Atari Users' Group

President..... Frank Huband..... (703) 527-4770
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 Membership..... Gerald Whitmore..... (301) 459-6164
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 V-Programs..... Jim Campbell..... (703) 425-1440
 Disk Librarian..... Abe Friedman..... (703) 920-4788
 Tape Librarian..... Bruce Ingalls..... (703) 430-3287
 BBS..... ARMUDIC..... (703) 569-8305

Meetings. 3rd Tuesday of every month, 5:30-8:30, Room 543, National Science Foundation offices, 1800 G. Street NW, Washington, DC. The closest subway stop is Farragut West, on the Blue and Orange lines. Take the 18th Street exit, and walk south (against the flow of traffic) down 18th Street for three blocks to G street. The building, on the corner of 18th and G, can be identified by a sign for the Madison National Bank on the corner. Parking is available in the building for a fee. The front entrance is on the west side of 18th street, between F and G.

New Members: Dues are \$15 (includes subscription to Current Notes). Send checks, payable to National Capital Atari Users Group, to Allen Lerman, 14905 Waterway Drive, Rockville, MD 20853.

Hoodbridge Atari Computer Users Group

President..... Jack Holtzhauer..... (703) 670-6475
 First VP..... Dave Marrandette..... (703) 670-7675
 VP-Education..... Tim Mitchell..... (703) 221-7722
 VP-Liaison..... Cecil Alton..... (703) 670-4842
 Secretary..... Mike Stringer..... (703) 786-8755
 Treasurer..... John Thomas..... (703) 670-8645
 Librarian..... Arnie Turk..... (703) 670-2547

Meetings: Monthly, 7 - 10 pm, usually on third Tuesday of the month, Community Room, Potomac Branch, Prince William County Library, Optiz Blvd., Woodbridge, VA. Exact dates: SEP 24 (4th Tuesday), OCT 15, NOV 26 (4th Tuesday), DEC 17, JAN 21, FEB 18, MAR 17 (3rd Monday), APR 15, MAY 20, JUN 17. Entering Woodbridge from either North or South on Route #1, proceed to the intersection of Route #1 and Optiz Blvd. (adjacent to Woodbridge Lincoln-Mercury). Turn West onto Optiz and take first left turn into the library's parking lot. The Community Room is located to your left immediately upon entering the main building.

New Members: Dues are \$10/year plus \$1 monthly dues (includes subscription to Current Notes for members in good standing). Send checks, payable to WACUG, to Mike Stringer, 709 Rutherford Dr., Fredericksburg, VA 22401.

SEPTEMBER, 1985						
SUN	MON	TUE	WED	THU	FRI	SAT
	LABOR DAY			AURA & SMAUG		
1	2	3	4	5	6	7
NOVA- TARI				CN Ar- ticles Due		
8	9	10	11	12	13	14
	CN Ads Due	FACE & NCAUG				
15	16	17	18	19	20	21
		CPM & WACUG				
22	23	24	25	26	27	28
29	30					



The Personal Computing Association
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